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CAPACITY-BUILDING

Submissions from Parties included in Annex II to the Convention

Note by the secretariat

1. At its fifth session, the Conference of the Parties, by its decision 10/CP.5, requested Annex II Parties to the Convention to submit information, which supplements the information contained in their national communications on activities and programmes which facilitate capacity-building in developing countries in the area of climate change, by 1 March 2000 (FCCC/CP/1999/6/Add.1).

2. The secretariat has received seven such submissions,[1] which are reproduced as received, in the attached annex.

[1] In order to make these submissions available on electronic systems, including the World Wide Web, these contributions have been reformatted. The secretariat has made every effort to ensure the correct reproduction of the texts as submitted.

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PAPER NO. 1: AUSTRALIA

AUSTRALIAN SUPPORT FOR CAPACITY-BUILDING ACTIVITIES IN DEVELOPING COUNTRIES

1. INTRODUCTION

1.1 Australia appreciates the opportunity afforded by Decision 10/CP.5 to supplement the information on support for capacity building in developing countries contained in our 1997 National Communication.

1.2 We found the list of capacity-building needs of developing country Parties that Gambia, on behalf of the Group of 77 and China, identified in FCCC/SB/1999/MISC.9 to be a useful framework against which to update our reporting on capacity building. We report against this framework below.

1.3 The capacity building framework that the Secretariat will devise on the basis of Decision 10/CP.5 should review the significant ongoing support by United Nations agencies, international organizations, and multilateral and bilateral and institutions, including the GEF.

1.4 Australia considers that the Secretariat, when formulating the framework, should take full account of the current review by the GEF of its enabling activities, its capacity building activities, its country dialogue workshops and its capacity building initiative. We consider that the GEF should have an important role in supporting capacity building programs for climate change, as part of the response by United Nations agencies, international organizations, and multilateral and bilateral and institutions.

SCOPE OF AUSTRALIAN SUPPORT

2.1 As well as our extensive domestic efforts to combat climate change, Australia's overseas aid program is funding programs and projects that help to abate greenhouse gas emissions, assist in regional and international efforts to monitor climate change, and facilitate adaptation to climate change. Expenditure under the overseas aid program on climate change-related activities in the 1998-99 financial year was approximately A$29.5 million; the total value of activities is around A$268 million.

2.2 These activities focus on four key areas, namely energy; science and analysis; environmental management; and forestry and land management. Australia also gives particular attention to the vulnerable small island states of the Pacific.

2.3 Energy: Many key social issues—poverty, employment, agricultural production and food scarcity, and security issues—are linked to patterns of energy use. Providing sustainable energy

will simultaneously reduce poverty and improve the environment by reducing greenhouse gas emissions. These projects may become models that may be replicated elsewhere. By thus encouraging the introduction of climate-friendly energy production Australia is helping to introduce soft and hard technologies through which significant greenhouse gas reductions can be achieved.

2.4 Science and analysis: Responses to the challenge of global warming should be based on sound scientific information and take into account important linkages to economic and other policies. The overseas aid program is helping developing countries acquire information on the effects of climate change to enable them to formulate appropriate responses.

2.5 *Environmental management:* The overseas aid program includes support for institutional strengthening, collaborative research and education and training. Projects in these areas build the capacity of developing countries to formulate policies and activities for mitigation and adaptation to climate change.

2.6 *Forestry and land management:* Australian Government funding contributes significantly to the development and management of forests as carbon sinks. Australia funds over one hundred and fifty forest-related activities, which have been assessed as having positive greenhouse gas abatement impacts.

2.7 Vulnerable states: Australia is helping vulnerable Pacific nations to address climate change through a strategic response that addresses adaptation and abatement issues. The overseas aid program is supporting not only projects that directly target climate change problems, but also broader socio-economic development activities that help small island states to cope better with climate change.

2.8 Most projects funded under the overseas aid program include provision for capacity building. Australia's experience suggests that development projects which include components such as training, management strengthening, improved decision making, public education and networking are more likely to be sustainable in the longer-term than projects without these components.

2.9 In addition to support from the overseas aid program, Australia assists developing countries through the A$6 million International Greenhouse Partnerships (IGP) program. This program supports overseas partners to facilitate commercial projects that have the potential to deliver greenhouse gas emissions reduction credits while developing the project management capacity of host countries, including developing countries.

2.10 In addition to the above support, since 1992 Australia has committed approximately A$116 million to the Global Environment Facility (GEF), which is an entity operating the Convention's financial mechanism. The GEF supports a broad range of capacity building

activities related to climate change. Australia considers that the GEF should take a prominent role, in concert with other multilateral agencies and bilateral donors, as well as developing countries' own efforts, in providing the capacity building necessary to help to achieve the objective of the Convention.

3. CAPACITY-BUILDING FOR THE CLEAN DEVELOPMENT MECHANISM

3.1 Australia has made an initial commitment of US$2 million to assist developing countries in the Asia Pacific region participate in the National Strategy Studies (NSS) program, managed by the World Bank. The program assists potential host country governments to explore the opportunities and potential benefits from participating in CDM.

3.2 Each NSS is designed to emphasize the needs and interests of the participating country. The objective of each study is to provide the relevant national authorities and other stakeholders with an opportunity to develop and analyse options to better understand the issues and opportunities presented by international markets and other potential financing opportunities for greenhouse gas (GHG) reduction.

3.3 During 1999, Australia commenced planning for NSSs with the governments of Thailand, Vietnam and Pacific island countries. We look forward to expanding the NSS program in Asia Pacific during 2000 and beyond.

3.4 Australia has also initiated a number of capacity-building activities under the International Greenhouse Partnerships (IGP) program that are aimed at helping enhance institutional capacity and building the knowledge and information bases for methodologies related to greenhouse gas mitigation. Activities include hosting awareness raising and technical workshops (Indonesia July 1997, Mauritius July 1998, South Pacific July 1999 and Viet Nam September 1999) and undertaking missions to potential host countries.

3.5 Under the IGP program, Australia is also conducting a series of technical training and development courses on greenhouse gas mitigation, project opportunities and methodologies. To complement these courses we are producing a series of workbooks. Workbooks on two sectors (renewable energy and fugitive emissions from primary energy production) have already been produced and workbooks on electricity and heat generation from fossil fuels, energy efficiency in industrial applications, and energy efficiency in commercial buildings are currently being prepared.

3.6 All projects funded under the IGP program are required from 1 January 2000 to provide capacity building elements within the partner country, with the intent of enhancing the country's ability to participate in CDM/JI activities. Capacity building activities will be incorporated into project proposals and jointly agreed between the designated authority in the partner country, the IGP office and the project participants.

4. INSTITUTIONAL CAPACITY-BUILDING

4.1 Responses to the challenge of global warming should be based on sound scientific information and take into account important linkages to economic and other policies. Australia is helping developing countries to get the information they need on the effects of climate change so they may formulate appropriate responses.

4.2 Provision to help strengthen national UNFCCC focal points or national bodies designated to coordinate climate change activities is encompassed in the Australian NSS program. The terms of reference for both the Thai and the proposed Vietnam studies include a focus on improving understanding of the CDM, including (a) the role and responsibilities of those governments; (b) different types of arrangements involving bilateral and multilateral investments; (c) issues surrounding different types of additionally; (d) and baseline determination.

4.3 Through the Australian Centre for International Agricultural Research (ACIAR), Australia supports collaborative programs between Australian and developing country research agencies. ACIAR-supported research relevant to climate change includes: carbon capture in biomass through reafforestation, conservation of crop residues, and build-up of soil organic matter; crop adaptation to higher levels of carbon dioxide in the atmosphere; improved productivity and efficiency; and quantification of the socio-economic value of forest preservation and biodiversity. An activity of particular note is the ACIAR-supported program on *Alternatives to Slash and Burn* in Indonesia, which aims to develop a range of land use options for Indonesia that balance global environmental objectives (biodiversity conservation, greenhouse gas emissions and carbon sequestration) with economic development and poverty reduction.

5. CAPACITY BUILDING FOR TECHNOLOGY TRANSFER

5.1 Australia recognises the importance of the transfer of technology to address climate change. The most efficient and effective way to attain such transfers is through market-based approaches that focus on the private and community sectors. Governments have a role to play in providing an enabling environment to facilitate the transfer of technologies through such channels.

5.2 The Australian overseas aid program plays its part in this process by supporting technology transfer of innovative technologies that can then be replicated by the private sector and community groups. For example, the aid program funds projects that support fuel substitution (solar and biomass), and improve the efficiency of fossil-fuel-fired power stations.

5.3 Australia also plays a role in strengthening developing country capacity to manage their resources, with the least climate change impact. The *Coal Technology Training Program* is a good example of Australia's work in providing capacity building for technology transfer to

developing country partners. The primary objective of the project is to provide developing countries in Asia with training required to ensure that they utilise coal in an environmentally responsible manner. The program aims to train Asia's coal-burning industries in the technologies required to reduce their production of noxious and greenhouse gases to internationally acceptable levels. The accrued benefits from the project include the transfer of necessary skills and technology to the energy sector and reduction of the level of emission of pollutant and greenhouse gases and airborne particulates.

5.4 Australia, in a joint initiative with France, is contributing to a *Regional Renewable Energy Program* that will focus on small-scale renewable energy technologies appropriate for the Pacific Islands. The project helps officials in the partner countries to identify their technology needs and to address these needs in a manner that builds the countries' capacity to sustainably use the chosen technologies.

6. CAPACITY BUILDING FOR NATIONAL COMMUNICATIONS

6.1 Australia is a strong supporter of the national communications process. Through their national communications all Parties can share their experiences in a collegiate manner as a basis for improving the global response to climate change.

6.2 Australia endorses the significant support that the GEF is providing to non-Annex 1 Parties to prepare national communications under Article 12 of the Convention. We encourage the GEF to provide timely funding to those Parties that have completed their first communications and wish to prepare second communications.

6.3 The GEF-funded Pacific Islands Climate Change Assistance Project (PICCAP) focuses on assisting Pacific island countries to prepare national communications. Australia supports PICCAP, which is implemented by the South Pacific Regional Environment Programme.

6.4 Australia is augmenting the work of PICCAP in Fiji where the Australian Greenhouse Office (AGO), is assisting to enhance national capacity to strengthen preparation of Fiji's greenhouse gas inventory. In 1999, the AGO funded a workshop in Fiji to facilitate the exchange of views and experiences of Fijian and Australian inventory experts. This activity included a review of Fiji's current inventory. Australia and Fiji are considering establishing a standing working group to enable ongoing cooperation on inventory issues. Australia is currently considering extending this model to other developing countries in our region.

7. CAPACITY BUILDING FOR ADAPTATION

7.1 Small island states in the Pacific, many of which are only a few metres above sea level, are especially vulnerable to the potentially adverse effects of climate change. Many of the infrastructure assets of these island nations are located along the coastline. Climate change

models predict sea levels will rise between 15 and 95 cm by the year 2100, with a 'best estimate' of 50 cm. The vulnerability of coastal resources, human settlements, and infrastructure to sea level rise underscores the urgent need for an integrated approach to vulnerability and adaptation.

7.2 Australia is helping the vulnerable Pacific nations to address climate change through building capacity for a strategic response, which addresses adaptation and abatement issues. We recognise that adaptation in response to the adverse effects of climate change should follow a methodical approach which involves vulnerability assessments, impact analyses, identification of adaptation options, and implementation of adaptation options through project development.

7.3 An example of an adaptation project in the Pacific is the South *Pacific Sea Level and Climate Monitoring Project*. The project is helping eleven Pacific Island countries to monitor climate and sea level changes though a network of sea level monitoring stations, transmission networks, and computer systems. A twelfth sea level monitoring station, to be placed in the Federated States of Micronesia, is to be installed during 2000.

7.4 The second phase of the project is consolidating data collection, analysis and reporting. It also provides assistance to train Pacific islanders from thirteen countries on the links between sea level and climate variability, and impact assessment. The collection of accurate long-term trend data, and associated strengthening of local technical capacity, will assist Pacific governments in planning and implementing appropriate measures to adapt to the impacts of climate change.

7.5 Phase 3 of the *Project* is at an advanced stage of planning. This phase of the project may include components on impact assessment, adaptation and mitigation are under consideration.

7.6 For example, data and experiences from the *Pacific Sea Level and Climate Monitoring Project* provide a basis for broader planning for adaptation. For example, the coverage of adaptation issues in Pacific island countries national communications benefits from information derived from the project. In addition, Australia has agreed that adaptation may be addressed through the terms of reference for the Australian NSSs in Pacific island countries. Because these countries are particularly vulnerable to the adverse effects of climate change they wish to identify though the NSS process the opportunities for accessing funding through the proposed CDM adaptation fund.

7.7 The overseas aid program is supporting not only projects that directly target climate change problems, but also broader socio-economic development activities that help small island states adapt better to climate change. In this context we strongly support the approach to adaptation taken by AOSIS in FCCC/SB/1999/MISC.8. AOSIS believes that specific measures based on impacts in key socio-economic sectors such as water supply, health, coastal hazards and agriculture may be taken to adapt to climate change.

7.8 The *Land and Marine Resource Use Planning Project* in Niue is developing a land and marine use plan. The project is strengthening the Government's capacity to sustainably manage the island's natural resources through assessing the current resource use and analysing future resource use issues. Recommendations have been made with respect to land use zoning, building constraints and other issues relevant to resource use management. The benefits accruing from this project include the development of industries such as tourism, agriculture and small business in a way that does not detract from the physical environment and prevailing cultural values.

7.9 Australia has also funded a number of short-term adaptation and vulnerability studies which have been carried out by regional organizations, for example:

- Financial support was given to the South Pacific Applied Geoscience Commission to conduct a series of studies of vulnerability to erosion in Fiji and Kiribati. In addition, in-country seminars were run in Tuvalu, Kiribati and Samoa.

- Impacts and vulnerability studies have been conducted by the South Pacific Regional Environment Programme (SPREP) on different environmental and economic sectors for the following countries: Fiji, Samoa, Tuvalu, Kiribati, Marshall Islands, Tonga and Palau. These studies included the testing of the Intergovernmental Panel Climate Change Common Methodology for sea level rise impacts on the islands.

- Work has been performed in the economic and environmental sectors of water, coastal protection, energy and coastal management planning under SPREP's Adaptation Options Program in Fiji, Samoa, Tuvalu and Marshall Islands.

CAPACITY BUILDING FOR PUBLIC AWARENESS

8.1 Raising public awareness about climate change issues facilitates understanding and stimulates the involvement of civil society in the decision-making and planning for any necessary responses to changing conditions, including through taking advantage of traditional knowledge.

8.2 Australia's funding to SPREP helps increase public awareness of climate change in the Pacific. Through its Policy Programme, SPREP has carried out a number of public awareness and training workshops in Nuie, Fiji, Samoa, Vanuatu, Solomon Islands, Cook Islands, Federated States of Micronesia, Marshall Islands, Kiribati and Tuvalu. These targeted senior technical and policy-makers on climate change and sea-level rise. The *South Pacific Sea Level and Climate Monitoring Project* includes a component for outreach to the communities of the small island states. As part of this outreach program, SPREP produces a quarterly newsletter that reports on the latest data on sea level monitoring. The newsletter is widely distributed to relevant government bodies, organisations and individuals.

8.3 *Under the Australian NSS program, Thailand will place particular emphasis on building* public understanding about climate change.

CAPACITY BUILDING FOR COORDINATION AND COOPERATION

9.1 Coordinated and collaborative responses are necessary to address global warming. With Australian support, developing countries coordinate climate-related programs at the community, national and regional levels.

9.2 The IGP program has funded workshops in the Asia Pacific region in which public and private sector representatives meet to consider opportunities and modalities for cooperation on climate issues through the Kyoto mechanisms.

9.3 SPREP, with majority core funding from Australia, is the focal point for coordinating responses by Pacific island countries to the many issues emerging from the climate agenda. SPREP gives priority to enhancing national capabilities and capacities with a view to developing countries' own national climate policies to address climate variability and sea level changes. It is mandated to be the clearing, coordinating and where possible, the implementing organisation on climate change and sea-level rise issues for the region. SPREP has an 'Impacts Programme' that addresses the impacts and consequences of climate change on the people, economic, environmental and social sectors of the Pacific. Australia has funded a number of impacts and vulnerability studies (see above at paragraph 7.9).

9.4 Also in the Pacific, Australia supports the South Pacific Forum Secretariat's energy program, which is building the capacity of Pacific island authorities to promote energy-efficiency policies and renewable energy technologies.

9.5 The Australian funded *Renewable Energy Project* aims to strengthen the capacity of authorities in China to shift from a supply-oriented, state-supported technology deployment to demand-driven, investor and consumer friendly approaches to increase investment in renewable energy technologies. The project aims to formulate a Chinese Renewable Industries Association and an Investment Opportunity Facilitator. A series of capacity-building workshops are being held which will involve training and visits to Australia, Japan, the Netherlands and the UK. The project also aims to produce certification standards, and codes of practice amongst the renewable energy industry in China.

9.6 The Australian NSS program provides significant opportunities for developing countries to work together on climate change issues. In July 1999, Australia funded a workshop which brought representatives of the private sector and public sectors from the region together to discuss challenges and opportunities arising from the CDM. Under the Australian NSS program, Thailand proposes to develop networks with other countries in the region in order to share views on the NSS and more generally on the CDM. Australia will fund workshops, visits and other activities to facilitate this networking.

CAPACITY BUILDING FOR HUMAN RESOURCE DEVELOPMENT

10.1 Australia considers that all of the capacity building activities reported above contribute broadly to developing human resources. Here we highlight some activities with specific human development components that have not yet been mentioned.

10.2 SPREP, with Australian technical and financial support, helps 22 Pacific countries and territories, to deal with crucial environmental and natural resource management issues, including climate change. It has an impressive program of training and outreach activities on environment issues, including on climate change. Australia funds SPREP's climate change officer who works on the Australia-Pacific Sea Level and Climate Monitoring project. SPREP also implements the GEF-funded Pacific Islands Climate Change Assistance Program.

10.3 The overseas aid program also supports a broad range of forestry projects that strengthen developing countries' capacity to enhance carbon sinks through sustainable management and conservation. For example, the Forestry Human Resource Development Project in Papua New Guinea (PNG) assists field and policy officers to manage the country's forest resources on a sustainable basis by improving human resource development in the forestry sector. The project will upgrade the practical forestry training provided at the PNG Timber Industry Training College; rationalise and improve the forestry training and degree programs at the PNG University of Technology; strengthen HRD opportunities for all agencies involved in the forest sector including NGOs and conservation agencies; and provide assistance to enhance the PNG Forest Authority's capacity to monitor and control logging in PNG's forests.

10.4 The *Vanuatu Sustainable Forest Utilisation Project* is assisting the Vanuatu Forestry Department to strengthen its capacity to achieve sustainable forest utilisation.

11. CAPACITY BUILDING FOR INPROVED DECISION-MAKING

11.1 The Australian NSS program will help to improve awareness and understanding of the CDM in partner countries, as well as assist policy-makers and economic enterprises towards better understanding of the opportunities presented by the CDM to enhance sustainable development. In turn this will strengthen the capacity of the relevant authorities to manage the CDM in their countries.

11.2 The Australia co-financed GEF project in Thailand aims to strengthen demand-side management in the Thai electric power sector and throughout the Thai economy has had significant positive effects on the decision-making capacity of the relevant Thai authorities. Among other things the project has (a) created a demand -side management organisation unit in the Electricity Generating Authority of Thailand to implement demand-side management programs; (b) developed and implemented technological and market intervention strategies in the residential, commercial and industrial sectors; and (c) developed financial mechanisms to assure

the market adopts various energy efficiency programs. The program includes a substantial component for training public and private sector personnel in the various aspects of demand side management. Australia contributed approximately A$8 million to the project.

11.3 The Australian-funded *Energy Policy and Systems Analysis Project* in the ASEAN region aims to enhance the capacity of policy-makers and planners to assess the effectiveness and impact of the range of policy options and strategies to tackle the economic, technical and environmental problems associated with energy sector activities.

11.4 The *Environmental Management Capacity Building Project* in India is strengthening the implementation, monitoring and control in the mining sector in India with positive spin-offs for introducing arrangements and practices that will be beneficial for reducing greenhouse gasses.

CONCLUSION

12.1 Australia will continue to program capacity building activities that help to achieve the Convention's objective. We will keep this support under review in order to meet the changing requirements of developing countries.

PAPER NO. 2: CANADA

Canada's Submission on Capacity Building in Parties included in Annex I but not included in Annex II

Decision 11/CP.5 requests Parties included in Annex I but not included in Annex II to identify their needs and priorities for capacity-building. Canada, as a Party that is included in both Annexes I and II, would like to present the following submission for inclusion in the Secretariat's compilation and synthesis of information submitted in support of this decision.

Canada is very supportive of the Secretariat's role in developing, in close coordination with Parties at the twelfth sessions of the subsidiary bodies, elements of a draft framework for capacity-building activities. We hope that the submissions received will assist the Secretariat in the compilation and synthesis of the existing capacity-building activities by Annex II Parties and the needs and priorities of Parties that are included in Annex I but not in Annex II. Such a compilation and synthesis will be extremely useful in assisting Annex II Parties set priorities for their bilateral aid programs; identify opportunities for co-operation; and assist them in leveraging funding from multilateral institutions. Canada encourages the Secretariat to proceed with this task in close coordination with other multilateral initiatives.

Canada is guided by the definition of the OECD's Development Assistance Committee (DAC) in its reporting on capacity building activities. With respect to Capacity Development in Environment, the DAC defines *Environmental capacity* as the ability of individuals, groups, organizations and institutions to address environmental issues as part of a range of efforts to achieve sustainable development. The term *capacity development in environment* (CDE) describes the process by which capacity in environment and appropriate institutional structures are enhanced.

International assistance experience suggests that enhancing capacity to address climate change requires approaches that emphasize: building on local priorities to ensure ownership of the activity, using local expertise where possible; involving a wide-range of stakeholders integrating activities at micro, meso and macro levels; and making long-term interventions. Helping the beneficiaries of Canada's international assistance efforts increase their own ability to help themselves is essential for ensuring that benefits are sustained beyond the life of individual projects. Canada believes that while international co-operation can support capacity development, it is the people in these countries themselves that must take charge.

Capacity building is cross-cutting across a number of aspects of the Framework Convention on Climate Change and the Kyoto Protocol. In particular, Canada believes that attention should be focused on strengthening institutional, technical, as well as individual capacity in order to ensure the implementation of the Convention and early entry into force of the Kyoto Protocol. In Canada's view, capacities should be enhanced in all three areas of climate change: mitigation;

adaptation; and science. Specifically, capacity building should include a focus on: monitoring and reporting of national emissions; national registries; identification and implementation of projects under Article 6 including activities related to baselines, reporting and verification, and technology assessment; strengthening of National Focal Points and institutions; policy analysis and coordination; adaptation and impact assessment; climate monitoring; among others.

This submission outlines Canada's activities and programmes that facilitate capacity-building in the area of climate change in countries that are listed in Annex I but not Annex II. Those projects which were included in Canada's last National Communication are not repeated here. The list is divided into four categories, as follows:

- the first category includes bilateral MOUs or other agreements which were negotiated by the Government of Canada with Parties included in Annex I but not Annex II. In recent years, activities to build capacity in the area of climate change has become a greater focus within our existing bilateral relationships. This is due to an increased commitment of the Government of Canada to address climate change internationally as well as an increased tendency for our bilateral partners to identify climate change as an area into which they wish to extend our co-operation.
- the second category includes capacity-building activities in which climate change mitigation, adaptation or science is a primary objective.
- the third category includes activities for which climate change is not the primary objective but which result in increased capacity to address climate change and which result in the reduction or removal of greenhouse gases from the atmosphere, or improve the ability of the country to adapt to the effects of climate change.
- the final category includes capacity-building activities which are more broadly related to climate change.

Annex 1

Canada's Activities and Programs which facilitate Capacity Building in Countries in Transition

Category 1 MOUs and Other Agreements				
Country/ Region	**Activity/Program**	**Description**	**Dates**	**GOC Dept.** [1]
Poland	MOU on Environmental Cooperation	Agreement between Environment Canada, Industry Canada and the Polish Ministry of Environmental Protection, Natural Resources and Forestry to promote cooperation on key issues and to foster a cleaner global environment. The MOU is to be expanded in March, 2000 to include an annex specifically focused on climate change.	1994 - signed - renewed	IC/EC
Russia	MOU on Environmental Cooperation	Agreement between two Governments to enhance environmental cooperation and exchange views on major global environmental issues	1989 signed 1993 renewed	EC
Ukraine	MOU on cooperation on climate change activities	Agreement between the two Governments to pursue joint projects that reduce net greenhouse gas emissions.	Signed 1999	EC

[1] Government of Canada Departments responsible for projects include: EC - Environment Canada, CIDA - Canadian International Development Agency, DFAIT - Department of Foreign Affairs and International Trade (including the CDM/JI Office), IC - Industry Canada, NRCan - Natural Resources Canada

Category 2 Projects which target Climate Change				
Country/ Region	**Activity/Program**	**Description**	**Dates**	**GOC Dept.**[2]
Russia	Arctic Environmental Monitoring, Phase II	This project involves setting up an air monitoring station and training for the Institute for Global Climate and Ecology and the Typhoon Science and Production Association. The establishment of an environmental monitoring capability will also provide Russia with a critical link in the process of developing and implementing their own management program for the Arctic.	1996 - 2001	CIDA
Ukraine	Project with Canadian Institute of Public Administration	This project aims to strengthen Ukraine's capacity to address climate change through the development of a national climate change strategy and build institutional and individual capacity to support the development of joint implementation projects.	1999- present	EC
Ukraine	Ukraine Solid Waste Management	The minimization of the release of GHG will be accomplished through the collection of landfill gases from the existing landfill, and the development of energy cells for future landfill capacity. Collected landfill gases will be used for the generation of electricity.		

[2] Government of Canada Departments responsible for projects include: EC - Environment Canada, CIDA - Canadian International Development Agency, DFAIT - Department of Foreign Affairs and International Trade (including the CDM/JI Office), IC - Industry Canada, NRCan - Natural Resources Canada

Category 3 Projects with an impact on Climate Change				
Country/ Region	**Activity/Program**	**Description**	**Dates**	**GOC Dept.**[3]
Poland	Environmental Technology Transfer Fund	This project aims to increase the technological capacity of Poland to undertake environmentally sustainable projects through: technology awareness activities; technology assessments; and technology demonstrations. (i.e. pollution prevention/recycling; and hydroelectric generation.)	1998 - 2003	CIDA/ IC/EC
Russia	Promotion of Energy Efficiency	This project includes the demonstration of Canadian energy efficiency technologies and services	2000-2003	CIDA NRCan
Russia	Environmental Management - Oil & Gas Sector	This project aims to build capacity for environmental management in the oil and gas sector.	2000-2003	CIDA
Russia	Regional Power Reform	Canada is working with the World Bank to support the commercialization and corporatization of two energos in Russia's northern regions of Murmansk and Komi. The project will strengthen management and operations in order to improve efficiency and compliance with the new regulatory and institutional framework for the power sector. The project will also provide policy advice to the Regional Energy Commissions associated with the selected energos.	1998-2000	CID A

[3] Government of Canada Departments responsible for projects include: EC - Environment Canada, CIDA - Canadian International Development Agency, DFAIT - Department of Foreign Affairs and International Trade (including the CDM/JI Office), IC - Industry Canada, NRCan - Natural Resources Canada

Russia	Energy Policy Advice Phase III	The project is building capacity within the Russian government, particularly the Ministry of Fuel and Energy, to manage Russia's oil and gas resources in the context of the move to a market economy. It provides training to Russian officials from various ministries and committees at the federal and regional level, in the techniques for public management of the oil and gas sector, including the preparation of legislation and regulations.	1998-2000	CIDA
Russia	Geomatics Technology for Forestry Services	This project is promoting reforms in Russian forest management using Canadian geomatics technology and forest industry/business expertise, thereby contributing to the sustainable management of carbon sinks.	1999-2000	CIDA
Ukraine	Environmental Management Development in Ukraine - Phase II	This project focuses, among other things, on research into current landfill and recycling practices; environmental audits of and introduction of management and technological changes leading to cleaner production in selected industries; dissemination of research; and building links between national and local government bodies to assure coordination and accurate reflection of local needs in national laws and policies.	1997 - 2000	CIDA

Category 4 Projects related to Capacity Building for Climate Change				
Country/ Region	**Activity/Program**	**Description**	**Dates**	**GOC Dept.**[4]
Russia	Lukoil Management Training	This project supports Lukoil's transition to an integrated commercial oil company, through training of middle managers. The project has resulted in improved managerial capacity and enhanced training functions within Lukoil.	1994-2000	CIDA
Russia	Cooperative Environmental Decision Making	This project seeks to develop and support processes for harmonization, coordination and negotiation of environmental decision-making which involve several government jurisdictions and the range of non-government interests. The project will lead to the development approaches and agreements to identify and meet appropriate environmental quality objectives and standards and reduce pollution, including GHGs.	1997-2000	CIDA
Russia	Integrated Economy Development Project in the Russian far east	The project will develop concrete economic development opportunities for the Khabarosk region based upon the sustainable, diversified exploitation of the region's natural resources. The projects will be small in scale, resource based, focused on satisfying internal markets first (but not exclusively), and designed for ease of replication elsewhere.	1999 - 2004	CIDA

[4] Government of Canada Departments responsible for projects include: EC - Environment Canada, CIDA - Canadian International Development Agency, DFAIT - Department of Foreign Affairs and International Trade (including the CDM/JI Office), IC - Industry Canada, NRCan - Natural Resources Canada

PAPER NO. 3: JAPAN

Japanese Cooperation in Capacity Building

Global warming, a crucial and urgent problem that threatens all humankind, needs to be addressed in cooperation with countries across the world. Japan recognizes the importance of efforts to build and enhance the capacity of developing countries and countries with economies in transition to combat climate change. Japan has not only assisted developing countries with mitigating GHG emissions through energy efficiency improvement, technology transfer and joint research, but also supported countries vulnerable to climate change in their adaptation to climate change through advancement of weather forecast systems and human resource development, etc.

In response to the request to Annex II Parties to supplement the information on activities and programs which facilitate capacity building in developing countries in the area of climate change (10/CP.5), Japan presents, in the following, a report regarding our past and ongoing activities in capacity building initiatives related to the Convention.

This report contains descriptions of Japanese cooperation in capacity building related to both mitigation and adaptation measures to climate change.

1. Support in mitigation of GHG emissions

Japan recognizes the importance of efforts to enhance capacity for significant participation of developing countries and countries with economies in transition to combat global warming. Therefore, Japan has helped them mitigate GHG emissions effectively taking into account the implementation of commitments under the Convention. Japan also notes that developing countries have strong needs for capacity building related to CDM that will give themselves opportunities for sustainable development, environmental integrity, investment and other relevant benefits. Japan implements various types of projects and programs to help many developing countries enhance environmental integrity not only for the mitigation of GHG emissions but also for other environmental improvements such as air pollution abatement.

The following are several examples of Japanese cooperation including financial support programs, projects improving efficiency, and joint research and development.

(a) Financial and technical support

- *The Kyoto Initiative*

Japan has implemented the Kyoto Initiative, a comprehensive medium- and long-term plan for environmental cooperation, which Japan announced in 1997. The Kyoto Initiative aims at strengthening environmental support that focuses on assisting developing countries in combating climate change. The philosophy of the Kyoto Initiative is based on global human security,

ownership and partnership as well as sustainable development. We have implemented this initiative along the three pillars of assistance, as follows.

- Cooperation in Capacity Building

  Over the five-year period beginning in FY 1998 Japan plans to train as many as 3,000 experts in fields related to climate change. More than 1,000 experts were trained in FY 1998 alone.

- Official development assistance (ODA) loans

  Japan provides ODA loans on the most concessional terms available internationally (0.75% interest rate, 40 year repayment period) to actively promote cooperation in fields such as energy saving technologies, new and renewable energy sources, and forest conservation and afforestation. Japan already committed itself to 22 projects whose total amount is more than US$ 2 billion.

- Transfer of technology and know-how

  Various programs for technology transfer are being implemented including those fo sustainable forest management and efficient use of energy.

- ***The Green Aid Plan (GAP)***

As other financial resources, Japan also contributes to environmental problems in developing countries by implementing the Green Aid Plan (GAP). The Green Aid Plan is the scheme that aims at achieving both economic development and environmental protection in Asian developing countries. Through close policy dialogue with subject countries, the GAP is implemented by effectively combining various measures, including cooperation in human resources development, research and study cooperation and so on. Most parts of the plan are financed by budgets outside the ODA budget although ODA fund could be used in technological cooperation.

As a project under GAP, the New Energy and Industrial Technology Development Organization (NEDO) has assisted in human resources development which is part of its energy environmental technological cooperation. NEDO has established the Clean Coal Technology Center (CCTC) and implemented a variety of CCTC-related projects, such as technological development, international cooperation and exchanges of information in order to promote development and proliferation of clean coal technology (CCT) focusing on protecting the environment from being damaged by the use of coals.

- ***Technical transfer in Climate Technology Initiative (CTI)***

The Climate Technology Initiative (CTI) was launched in 1998 by support of Japan and other OECD/IEA countries with a view to developing and spreading technologies to curb global warming as well as helping achieve the goal set by the UNFCCC. Japan and other OECD/IEA countries have jointly organized workshops on energy saving and seminars on technology transfer and have developed tools for efficient proliferation of climate technologies. Technical transfer activities, the first technical transfer seminar for Asian countries was held in Beijing in May 1998. The energy saving training workshops for experts in the industries of developing countries was held in Japan in October 1998 and in the United States in March 1999.

Furthermore, member countries are developing tools for helping developing countries efficiently search information they need from various databases on global environment protection technologies, such as the APNET (Asia-Pacific Network on Climate Change, see (d) below).

- ***Forest Conservation and Afforestation***

Japan has assisted sustainable forest resources management on the basis of the requests from developing countries. In Paraguay, Japan has transferred expertise and techniques that can be utilized by farmers, ranchers and residents of rural areas, who could potentially play a leading role in reforestation, in three regions where deforestation is progressing at a remarkable pace. Specifically, Japan extends the following comprehensive technical cooperation through the dispatch of experts, acceptance of trainees and provision of equipment:

- To conduct training of those who are concerned with forests.
- To establish seed-collecting forests and to maintain nurseries in order to produce planting stock.
- To supply planting stock and forestry techniques including thinned wood utilization techniques for the promotion of forestry activities, etc.

As the request of Laos, Japan has extended comprehensive technical assistance consisting of the dispatch of experts, acceptance of trainees and provision of equipment to Laos in order to prepare forest management plans with the participation of local people, to improve and develop forest management techniques, and to establish demonstration forests.

(b) Joint Research and development

- ***Research and development***

Japan has conducted research and development under the cooperation scheme by research organizations such as the New Energy and Industrial Technology Development Organization (NEDO). This type of cooperation, unlike technical cooperation aiming at transferring existing technologies, intends to meet country-specific and technological needs of developing countries. Japan has carried out joint research through accepting researchers. To take a typical example of research cooperation on climate change, NEDO has been engaged in "Practical Application of Waste Water Treatment Technology for Prevention of Global Warming" with Thailand since 1998.

(c) Human resource development

- ***Training Course***

Japan implements training courses which are intended to help experts of developing countries make national inventories and formulate policies against climate change, which are required by the UNFCCC, since 1992. Participants, who are officials responsible for global warming issues at governments of developing countries, receive training in the following subjects.

- Technologies of measures to prevent global warming in each sector

- Information of IPCC activities including major points of the IPCC Second Assessment Report of the IPCC
- Outline of Inventory and IPCC guidelines and methods to calculate various types of greenhouse emissions
- Information about measures to prevent global warming in Japan, information exchanged among participants.

2. Support in adaptation to climate change

Japan has strong concerns about adverse effects to countries prone to natural disasters presumably caused by global warming. Adverse effects to those areas are a threat especially in highly fragile regions like coastal zones. In fact, sea level rises have caused destruction of coastal forests and salt infiltration, causing damage to inland vegetation and farmland. Global warming also may change the behavioral patterns of typhoons, cyclones, and hurricanes in frequency and routes that might have been caused by changes in sea water level and temperature. Recognizing these serious circumstances, Japan has implemented adaptive activities in accordance with specific needs of vulnerable countries in wide areas. The following are some of the Japanese support activities related to adaptation, such as technical support, project assistance and human resource development.

(a) Financial and Technical support

- ***Improvement of Weather Warning Services Related to Natural Disasters***

In 1986, Japan initiated a grant aid project to Bangladesh to build a weather radar network and thereby equip a stronger system for the issuance of weather forecasts and alerts in the event of cyclones or tornadoes. However, knocking out of the country's communication network due to the cyclone in 1991, Japan implemented Microwave-linked warning system as the second phase and improved warning service system in the third phase.

Since FY1993, Japan has provided Bangladesh with grant assistance for the construction of multipurpose cyclone shelters that normally function as elementary schools and as emergency evacuation shelters when the threat of cyclones or flooding looms.

- ***Upgrading of Meteorological Observation and Forecasting system***

Archipelago countries in the southwest Pacific Ocean including Fiji have suffered from serious damage and heavy casualties by frequent cyclones. These adverse effects are the main cause that prevents the area including Fiji from developing.

The meteorological Agency in Fiji plays an important role on integrating and distributing the information regarding cyclone as well as relevant meteorological data. It is, however, needed to improve the capability of distributing the accurate meteorological information in order to mitigate destruction because facilities for observational systems and communication are not advanced enough. Therefore Japan provided to Fiji the project intended to improve the country's meteorological observation and communication system so as to mitigate cyclone-caused disasters.

Under these circumstances, the government of Fiji made "the project for upgrading of meteorological observation and forecasting system" to improve capability regarding meteorological facilities as soon as possible. Japan assisted Fiji with constructing special regional center of meteorology that was the executive institution and upgrading machinery and instruments in related to observation.

- ***Promotion of Photovoltaic Rural Electrification***

The electrification rate in Zimbabwe is 28.2%, but that of the rural areas is extremely, at 4.6 percent. The government of Zimbabwe pursues rural electrification, as the basis for the improvement of living standards in rural villages. Stand-alone photovoltaic generation systems that require no costly utility lines made low-cost electrification possible. As a result of the first and second preliminary project surveys conducted in 1994, the government of Zimbabwe requested Japanese assistance to surveys on rural electrification by solar power. Specifically, Japan has been requested to conduct feasibility surveys and evaluate the potentiality of solar power generation as a means of rural electrification. One of the purposes of the survey is to transfer technologies and know-how, including research methods, by holding training courses for officials in Zimbabwe.

- ***Grant Assistance for Grass-Roots Projects***

Japan offers a financial assistance scheme for projects designed to meet the diverse needs of developing countries, known as "Grant Assistance for Grass-Roots Projects (GGP)". This scheme is designed to support small-scale projects often proposed not by central government but by various bodies such as non-governmental organizations (NGOs) and municipal authorities. It has acquired an excellent reputation for its flexible and timely support at the grassroots revel.

(b) Project assistance

- ***Sea wall construction***

Male Island, the capital of the Republic of the Maldives, has been devastated by sea-level rises and high tide possibly attributed to climate change in the 90s. In order to combat these circumstances, Japan has assisted the government of the Maldives in constructing seawalls. On the basis of surveys conducted, it was determined to construct additional permanent shore protection facilities to the previously constructed detached breakwater. Prior to the determination, the need to make the shore protection facilities more secure against storms was confirmed. The basic concept of this project is to construct permanent shore protection facilities on the south coast of Male Island to dispel any fear of inundation form the sea so to conserve the social and economic basis for conducting normal livelihood.

(c) Joint Research and development

- ***Asia-Pacific Network for Global Change Research (APN)***

With a view to promoting cooperation in research on global change in the Asia-Pacific region, Japan has initiated the "Asia-Pacific Network for Global Change Research (APN)", in

cooperation with some other countries in this region. Climate change is one of the priority research areas, and workshops for land use change and forestry, climate change vulnerability and adaptation assessment in Pacific Island Countries are being supported in Fiscal 1999.

(d) Human resource development

- ***Training course***

Japan has implemented the training program to enhance developing countries' capacities to prevent and minimize the adverse effects of climate change. The objectives of the training program are to contribute:

- To the development of human resources who will promote the advancement of developing countries, and
- To the promotion of mutual understanding and friendship.

Participants who are supposed to participate in the course are meteorological officers who play a leading role in their meteorological service.

Through the course, participants are expected:

- To understand and become familiar with:
  - ✓ Overall knowledge of operational meteorological services and technology associated with these services,
  - ✓ Utilization of meteorological satellite data,
  - ✓ Short-, medium-, and long-range forecasting methods including the concept of numerical weather prediction, and
- To prepare a study report on topics with emphasis on application of the knowledge and technology participants gain throughout the course.

3. Policy support

In addition to these supports to both mitigation and adaptation, Japan also takes activities to assist in making policy related to climate change.

- ***Asia-Pacific Seminar on Climate Change***

Japan has organized the Asia-Pacific Seminar on Climate Change as a forum of discussion of global warming issues and countermeasures for the Asia-Pacific region. This seminar has been held on 9 occasions since 1991, with the participation of administrative officers and experts from all countries in the region as well as international organizations. The seminar has contributed to capacity building by raising the awareness of climate change, promoting exchange of experiences, supporting the effort being made by countries in the region to combat global warming, and one of the outputs is the establishment of APNET.

- ***The APNET (URL: http://www.ap-net.org)***

Japan offers a web-site to formulate a regional network, the Asia-Pacific Network on Climate Change (APNET), which allows easy public access to scientific and technological information related to climate change. Japan officially opened the APNET on the web in September 1998 after the APNET proposal was endorsed at the 8th Asia-Pacific Seminar on Climate Change. Based on the concept of promoting climate change mitigation actions through vitalizing the exchange of various types of information among countries and regions, the APNET:

- Provides climate change-related information, such as policies, legislation and results of research, in the Asia-Pacific region.
- Provides information about climate-friendly technologies offered by various organizations and institutions as well as international organizations such as UNFCCC, IPCC and so on (not limited to the Asia-Pacific Region).
- Introduces the scheduling and results of the Asia-Pacific Seminars on Climate Change and other related seminars, etc.

PAPER NO. 4: NEW ZEALAND

New Zealand's Submission on Capacity Building in Developing Countries

1 At its fifth session the Conference of the Parties to the United Nations Framework Convention on Climate Change requested Parties to supplement the information contained in their national communications on activities and programmes which facilitate capacity building in developing countries in the area of climate change (Decision 10/CP.5).

2 New Zealand's Second National Communication, submitted in June 1997, outlined a number of projects and activities aimed at capacity building in the area of climate change. It was noted that in addition to our contribution to the Global Environment Facility (GEF), New Zealand values and supports regional approaches and has a particular concern about the possible implications of climate change for small island developing countries.

3 The primary avenue through which New Zealand facilitates capacity building in the area of climate change continues to be our contribution to the GEF. Since the submission of our Second National Communication New Zealand has reconfirmed its commitment to the GEF. Under the 1998 Replenishment New Zealand committed itself to a contribution of $4 million SDR (or NZ$8.31 million) to be drawn down over ten years. New Zealand contributed NZ$1.3 million to the GEF in 1998/9.

4 New Zealand is involved in a number of regional and bilateral initiatives to facilitate climate change capacity building, through our Official Development Assistance programme (NZODA). The details of new initiatives, additional to those ongoing activities contained in our Second National Communication, are provided in an Annex to this submission.

5 New Zealand recognises the importance of capacity building in the area of climate change and we look forward to further consideration of the issue at the twelfth sessions of the subsidiary bodies in June.

Annex to New Zealand's Submission on Capacity Building in Developing Countries

A. NEW INITIATIVES AND PROJECTS

1. Name of the Project

The Pacific Initiative for the Environment (PIE)

2. Main Participating Entities in New Zealand

New Zealand Official Development Assistance (NZODA)

3. Host Country

Applications for funding from the PIE can be made by any organisation based in one of the countries in the Pacific Community.

4. Project Duration

Ongoing.

5. New Zealand's Aid

NZ $2.07 million for the 1999/2000 financial year

6. Project Type

Grant Aid

7. Project Description

New Zealand has just completed the second year of a new NZODA strategy for dealing with global environmental issues in the Pacific region, known as the Pacific Initiative for the Environment (PIE). The PIE identifies five priority areas, one of which is climate change. Projects may receive funding under the PIE on a competitive bidding basis. The initiative has an indicative funding level of NZ $2.07 million dollars for the 1999/2000 financial year.

In its first two years of operation the PIE has funded a number of projects aimed at climate change capacity building worth NZ$608,000. In 1998 and 1999 assistance was provided for preparatory meetings for Pacific Island country representatives to major international climate change meetings. These were aimed at enhancing effective participation in international negotiations by Pacific Island countries. Funding has also been provided for the secondment of a Pacific Island official to the AOSIS Secretariat in New York, to provide additional human resource linkages between AOSIS and Pacific Island Missions of the United Nations in New York.

B. VULNERABILITY AND ADAPTATION MEASURES

1. Name of Project

Vulnerability and Adaptation Assessment Certificate Training Programme

2. Main participating entities in New Zealand

NZODA

3. Host Countries

Cook Islands, Fiji, Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Samoa, Solomon Islands, Tuvalu, Vanuatu

4. Project Duration

1998/99

5. New Zealand's Aid

NZ$314,000

6. Project Type

Grant Aid

7. Project Description

New Zealand contributed NZ$314,000 to a Certificate Training Programme on Climate Change Vulnerability and Adaptation Assessment implemented by the International Global Change Institute (IGCI) at the University of Waikato. The project was aimed at enhancing the skills of experts from ten Pacific Island countries to enable them to prepare their initial national communications under the wider Pacific Island Climate Change Assistance Programme (PICCAP). As a result of this work a number of Pacific Island nations were able to submit their first National Communications to the Fifth Conference of the Parties last year.

C. INSTITUTIONAL SUPPORT

New Zealand makes financial contributions to a number of regional organisations which themselves promote climate change capacity building in the Pacific region.

1. Name of the Projects

Contribution to the core budget of the South Pacific Regional Environment Programme (SPREP); contribution to the core budget of the South Pacific Applied Geoscience Commission (SOPAC)

2. Main Participating Entities in New Zealand

NZODA

3. Host Country

Regional Pacific

4. Project Duration

Ongoing

5. New Zealand's Aid

SPREP - NZ$850,000
SOPAC - NZ$875,000

6. Project Type

Core Funding - Grant Aid

7. Project Description

The South Pacific Regional Environment Programme (SPREP) is a regional organisation established to promote cooperation and provide assistance on environmental issues in the South Pacific region. SPREP has a climate change programme which focuses on assisting countries to understand the science and likely impacts of climate change, and formulate appropriate response strategies to reduce the impacts of climate change and sea-level rise. In addition to providing core funding, New Zealand also funds SPREP's Legal Officer who is responsible for the implementation of international commitments, including in the area of climate change.

The South Pacific Applied Geoscience Commission (SOPAC) is a regional organisation that provides policy advice on the application of non-living sciences to the region. SOPAC has been involved in a number of vulnerability studies and studies on coastal management.

D. SUPPORT TO METEOROLOGICAL SERVICES

1. **Project Name**

Bilateral support to meteorological services

2. **Main Participating Entities in New Zealand**

NZODA .

3. **Host Countries**

Cook Islands, Fiji, Niue, Tuvalu

4. **Project Duration**

Ongoing

5. **New Zealand's Aid**

NZ$215,000 for the year 1999/00

6. **Project Type**

Grant Aid

7. **Project Description**

To develop and assist sustainable meteorological services through the provision of technical advice, management assistance and equipment.

PAPER NO. 5: NORWAY

NORWEGIAN SUBMISSION ON CAPACITY BUILDING

1. Background

With reference to Decision lO/CP.5 Norway hereby submits relevant information on activities and programmes which facilitate capacity building in developing countries in the area of climate change. The submission seeks to contribute to the process of developing elements of a framework for capacity building activities for consideration by the subsidiary bodies at their thirteenth session.

Reference is also made to previous submissions related to Norway's AU-projects where capacity building is a central element. Project activities have been reported utilising the Uniform Reporting Format for AU (URF) under the pilot phase as adopted by the fifth session of the Subsidiary Body for Scientific and Technological Advice. (SBSTA) The Norwegian AU programme will continue to produce reports, including on capacity building related to the projects.

In addition to the activities referred to in this submission, Norway supports organisations and institutions such as the GEF, The World Bank, UNDP, UNEP and UNCTAD All these institutions conduct capacity building activities. It is expected that the Climate Change Secretariat will compile information about these activities to give a full picture of the on-going capacity building activities.

Norway has extensive bilateral cooperation with developing countries where capacity building is an important element. In many countries focus is on strengthening the environmental administration and institutions. This submission will firstly focus on the activities funded by the Norwegian Climate Fund, which is established separately and in addition to the development assistance account. The climate fund provides funding for AU pilot projects, related methodological work and capacity building This will be followed by a brief presentation of the parts of the regular Norwegian development cooperation conducted by the Norwegian Agency for Development Assistance, which are relevant for climate change and capacity building.

Norway believes capacity building is critical to the effective participation of developing countries in the Convention and the Kyoto Protocol processes. Support is directed through various organisations and institutions, and also through bilateral cooperation on concrete projects Please

find below a brief presentation of the various activities~ and projects that received Norwegian funding in 1999.

2. Activities Funded by Norway

UNDP - Pilot Programme for AIJ/CDM Capacity Building

Based on Norwegian financial support, UNDP has during 1999 facilitated the work of looking at opportunities for CDM projects and identification of priority areas in the following selected countries: Peru. South Africa, the Philippines and Bulgaria. The purpose of the programme has been to explore on a practical level the issues and options inherent in the CDM and related project activities in different national contexts. The Government focal points for the UNFCCC, as Well as a range of public policy makers and private stakeholders, have been involved in the work. The project is now finalised, and the ~NDP has presented a final report. The lessons learned and experience gained through the project have given important input into the capacity building project that the UNDP now *is* conducting in cooperation with the World Business Council for Sustainable Development *as* a part of the UNFCCC initiative "Capacity-Building support for a CDM Pilot Project"

The World Bank - Norway *AIJ* Programme

The World Bank and Norway started a joint AIJ programme in 1996 where the purpose was to maximise learning on activities implemented jointly and to build capacity in the area of climate change. When selecting countries and projects, the aim has been to ensure different types of projects as well as a broad geographical representation.

In addition to the capacity building through developing and implementing projects, an important element in the AU programme has been to convene workshops related to the projects. The workshops have gathered stakeholders from countries in the region as well as international, regional and local organisations and institutions. In 1999, there were workshops in Burkina Faso and Mexico within the framework of the AU Programme. We are now planning a workshop related to the project in India. A report of the programme is now being prepared and will be discussed at a steering committee meeting in May 2000. This meeting will also discuss how the lessons learned and experience gained from the AU Programme can serve as input to the ongoing process.

South-North Knowledge Network on Climate Change

Norway hosted a workshop in 1999 in Oslo for the South-North Knowledge Network on Climate Change. The network comprises institutions from Zimbabwe, Senegal, India, China, Brazil, Argentina, USA, Ukraine, Netherlands, Sweden, Japan and Canada. UNCTAD, UNDP and UNFCCC participate in the network as observers. The purpose of the network is to enhance capacity in developing countries and increase understanding between the two groups The network promotes cooperation on concrete projects between institutions from developing and industrialised countries. The main focus for the network is on the Kyoto Mechanisms and in particular the Clean Development Mechanism.

Workshop on CDM in Latin- America

Norway organised, in cooperation with Centroamericano de Integracion Economica (BCIE) and Comision Centroamericana de Ambiente Y Desarollo (CCAD), a workshop in Honduras in November 1999. Focus for the workshop was the possibilities for CDM projects in the region. The workshop gathered stakeholders from seven countries in the region. One of the outcomes from the workshop was a declaration on future work, including the establishment of a regional Climate Fund.

University of the West Indies

Norway supports a capacity building programme in the University of the West Indies (UWI) over a three year period. The University of the West Indies is a key institution in the Caribbean when it comes to climate change related issues. By utilising modem tools of communication, the UWI provides long-distance courses in environmental education including climate change issues.

Long-distance learning

The Norwegian office of the World Business Council for Sustainable Development is cooperating with the World Bank and the Centre for International Climate and Energy Research - Oslo (CICERO) in order to establish a long distance learning programme on Climate Change and the possibilities for CDM projects in African countries.

SIDS-workshop in Lofoten

The Norwegian government hosted a workshop in Lofoten, Norway, in August 1999 on sustainable development for the SIDS. The program was developed in close cooperation with AOSIS. The workshop gathered a representative group of participants from the Small Island Developing States together with donor countries and international organisations. Climate Change was one of the key topics at the workshop.

Academic Cooperation China - Norway

The Norwegian Fridtjof Nansen Institute (FNI) is cooperating with the Chinese institution SEPA on possibilities for projects under the Clean Development Mechanism in China. The project intends to build capacity as well as increased understanding on both sides of the challenges and opportunities China is facing concerning the CDM. A report from the joint work will be published during the first half of 2000.

3. Activities co-funded by Norway

Three regional Workshops

The Initiative on North-South Partnership on Climate Change is convening three regional workshops in Africa, Asia and Latin-America on implementation issues related to the Clean Development Mechanism. Each workshop will look at concrete projects to enhance the understanding of what a CDM project might look like. The workshops are organised in cooperation with the World Business Council for Sustainable Development, and the participants are policymakers, academics and private sector representatives. The Pacific Institute is doing the practical organisation of the workshops. One workshop was held in Latin America in October 1999.

Workshop in Dakar

The former chairman of the Subsidiary Body of Implementation, Mr. Bakari Kante, convened a government - business workshop in Dakar for the African Group in May 1999. Representatives from a number of international organisations and representatives from donor countries were also invited to participate at the workshop. Focus was on the climate negotiations and possibilities and challenges related to the Clean Development Mechanism. The workshop was a follow up of a similar workshop in 1998.

Climate Network Africa - workshop

Climate Network Africa convened a workshop in September 1999 on the Clean Development Mechanism of the Kyoto Protocol with focus on Africa. Experts from 11 African countries participated at the workshop.

SIDS Workshop on Marshall Islands

Marshall Islands hosted the first workshop for AOSIS in July 1999. Participants came from a number of Small Island Developing States as well as several UN organisations and the World Bank. Focus for the workshop was on Climate change and the Clean Development Mechanism.

SUPPORT FROM NORAD TO CAPACITY BUILDING RELEVANT FOR CLIMATE CHANGE

1. Capacity building in environmental development co-operation

The main objective of the Norwegian Strategy for Environment in Development Co-operation 1997-2005 is to contribute to sound management of the global environment and biological diversity. Development of sustainable production Systems and reduced air pollution are among the prioritised areas in the Strategy.

Besides supporting recipient countries' efforts to implement international environmental commitments, it is an important principle in the Strategy to contribute to the recipient countries' ability to themselves identify the measures necessary to create sustainable development. This includes a strengthening of the countries' institutional capacity and professional competence by providing technical and economic possibilities for improved administrative and planning capacity in the environmental field. It also comprises support for the preparation and implementation of national environmental strategies and plans, and the development of legislation, regulations and standards.

2. Examples of capacity building in the field of climate change

Within the field of sustainable production systems and reduced air pollution, NORADs portfolio includes support to capacity building projects aiming at institutional and human resource development as well as improved decision-making The portfolio also includes support to identification/assessment of appropriate technologies, and to the introduction of Cleaner Production methods and industrial environmental standards.

Many of the capacity building projects in this portfolio have primarily a local or regional focus, and does not deal directly with greenhouse gas emissions. Standards and technologies necessary to deal with local and regional pollution problems are, however, in most cases also climate benign Increased capacity on sustainable production Systems and reduced air pollution may therefore contribute significantly also to reduce greenhouse gases, even if the primary focus is not global. The introduction of Cleaner Production methods and industrial environmental standards may in the same way be seen as capacity building measures that provide know-how and incentives necessary for the transfer also of climate benign technologies.

The intention here is not to give an exhaustive list of projects and programmes on capacity building relevant for climate change, but to provide some examples of relevant measures supported by NORAD:

Pan-African Regional Capacity Building for Environmental Change Research

Norway supports a three-year programme with the aim to build, through regional research activities, training, increased interaction between African scientists (regional networking) and inputs from developed country scientists, a Pan-African indigenous capacity to tackle the scientific and policy aspects of environmental change and sustainable development. Development of research issues related to climate prediction is one of the expected outputs of the programme. Implementing institutions: Global Change System for Analysis, Research and Training (START Int.), Pan-African START Committee (PACOM) and The Pan-African START Secretariat.

Environmental Co-operation with South Africa

Within the programme on environmental co-operation between South Africa and Norway, one of the supported projects is "Monitoring, capacity building and decision-making support for Government on flexible mechanisms under the Framework Convention on Climate Change in South Africa". The co-operation has been going on for two years from April 1998. Norway will continue the environmental co-operation for the coming five years.

Environmental Co-operation with Tanzania

a) Capacity building on Environmental Management: A project with the Environment Division for the Vice President's Office (VPO), which is responsible for international environmental instruments and conventions, including FCCC. Inclusion of capacity building on CDM in the co-operation is under consideration.

b) Cleaner Production: A five year project with the aim to enhance the promotion of cleaner production to industries and stakeholders in Tanzania in order to reduce/prevent industrial pollution and build national capacity in cleaner production. Implementing agencies: The Cleaner Production Centre of Tanzania (CPTC - to be established) and the Norwegian Institute of Technology (TI).

Environmental Co-operation with Zambia

A four-year institutional co-operation programme between the pollution authorities in Zambia and Norway, with the aim to improve control with and prevention of industrial pollution. The objectives the Air Pollution Regulation component of the programme is inter alia to establish an effective enforcement of air pollution (hereunder green house gases) regulations through licensing, emission measurements, monitoring and environmental audits. The goal of the Cleaner Production component is to improve the environmental performance of Zambian Industry through inter alia reduced energy consumption. Implementing agencies: The Environmental Council of Zambia, Zambia Associations of Chambers of Commerce and Industry, Norwegian Pollution Control Authority, Det Norske Veritas, Norwegian Institute for Urban and Regional Research and the Norwegian institute for Water Research.

Environmental Co-operation with the Peoples Republic of China

The following capacity building projects supported by NO RAD seems relevant in the context of climate change:

a) Environmental Statistics and Analysis. A four-year project with the purpose to, inter alia build capacity in the field of natural resources accounting, to enhance the capacity to prepare environmental statistics and improve tools for linking natural resource use to economic activity and environmental impacts. Implementing agencies: State statistical bureau of China and Norway.

b) China Council for Environment and Development: A five-year project with the purpose of supporting scientific work and studies on selected environmental issues. A work group on energy will focus on expanding energy efficiency and using renewable energy resources and on long-term options for use of coal in sustainable development Implementing agency: China Environment Project Society.

c) Evaluation of strategies to control Environmental Effects of Energy Technologies: A four-year project with the aim to contribute to knowledge and expertise about environmental impacts of various energy technologies. The project will finance two doctoral programmes. Implementing agencies: Beijing Institute of Technology, Qinghua University, Beijing Municipal Research Academy and the Norwegian School of Management.

d) Cleaner Production: Projects with the aim to reduce the level of pollution to air, water and soil from the industry in China by introducing Cleaner Production methods. implementing agencies: Beijing Science and Technology Commission/Government of Zhuzhou City and World Cleaner Production Society/Interconsult

e) Capacity Building in Environmental Management According to ISO 14000: A three-year project with the aim to improve the long term environmental performance of Chinese industry. Implementing agencies: Chinese State Environmental Protection Agency (SEPA), China Centre for Environmental Management System (CCEMS) and Det norske Veritas (DNV).

f) Master Plan against Air Pollution in the Shanxi Province: A project under formalisation with the purpose to reduce emission of pollutants from industry, in specific related to energy production/coal burning, and to develop a fully operational air quality monitoring and management system in the Shanxi Province. Implementing Agency: Shanxi Environmental Protection Bureau.

g) Air Quality Management and Planning System for Guangzhou: Three year project with the purpose to develop and establish an air quality management and planning system and to develop an air quality action plan as part of a city Environmental Master Plan to reduce air pollution in Guangzhou. Implementing agencies: Guangzhou Science and Technology Commission and the Norwegian Institute for Air Research (NILU).

h) Environmental Surveillance and Information System for Yantai: Three year project with the purpose to develop and establish an environmental surveillance system for Yantai and to evaluate, update and improve the monitoring system for air and water quality. Implementing Agency: Yantai Science and Technology Commission and NILU.

PAPER NO. 6: PORTUGAL
(ON BEHALF OF THE EUROPEAN COMMUNITY AND ITS MEMBER STATES)

SUBMISSION BY PORTUGAL ON BEHALF OF THE EUROPEAN COMMUNITY AND ITS MEMBER STATES ON CAPACITY BUILDING

A COMPILATION OF BEST PRACTICES IN THE EU

Portugal on behalf of the European Community and its Member States welcomes the opportunity to send a list on activities and programmes, which facilitate capacity building in developing countries in the area of climate change, according with Decision 10/CP.5.

Introduction

The EU and its Member States are funding a wide range of bilateral and multilateral climate change capacity building projects in developing countries. Much climate change related capacity building activities are integrated into development co-operation sector programmes, e.g. energy, environment and agriculture sector programmes. The EU and its Member States in co-operation with developing country partners has gained extensive experience in capacity building in developing countries in the area of climate change. This experience is illustrated by the attached project briefs, which reflect the importance of capacity building in developing countries and the recognition that this represents a major challenge for developing countries and countries with economies in transition.

The attached non-exhaustive list of climate change capacity building project examples were chosen by individual EU members and a list of projects supported by the European Community was compiled by the Presidency. The examples given show a great variety of different options and scenarios. This compilation focuses on what the respective EU member states consider as examples of promising approaches or success stories.

The EU is well aware that all Parties need to build capacity and strengthen institutions in order to meet the evolving demands of the Climate Change Convention and recognises that this represents a major challenge for developing countries and countries with economies in transition. The EU believes it essential to identify the needs, existing capacities and capacity building activities and invites developing countries to come forward with examples for what they consider as best practice in capacity building.

LIST OF PROJECTS AND ACTIVITIES PRESENTED:

Host Country/Region	Name of the Project	Partner
• Nicaragua	National Cleaner Production Centre	Austria (page 4 ff.)
• Ethiopia	Technical assistance in barrier identification and removal for rational use of energy in SME's	
• Nepal	Capacity building support to the Centre for Renewable Energy (AEPC)	Denmark (page 6 ff.)
• Fiji	Capacity building on technological and economic integration of wind energy and other relevant renewable energy technologies into the electricity systems of Pacific Island Countries (PICs)	
• Samoa	Support to capacity building on climate change to the South Pacific Regional Environment Programme (SPREP)	
• ASEAM Countries	Involvement of the public in environmental aspects	Finland (page 9 ff.)
• Egypt	Egyptian Pollution Abatement Project	
• Indonesia	Reforestation and natural forest management project	
• Nicaragua	Support to the implementation of the UNFCCC	
• SADC Countries	The meteorology development project for SADC Countries	
• West and Central Africa	Support of regional networking through the "RABEDE" (Réseau régional African Bioressources et Énergie pour le Développement et Environnement) and through the "REC" (Réseau Ecodev Coopération)	France (page 17 ff.)
• Mauritius	Coal-bagasse power plant of Belle Vue	
• Mali (Sahel)	Management of forest in dry lands (south of Mali) for sustainable firewood supply of cities (part of the "Household energy project)	
	Improvement of energy efficiency in households	
• Lebanon	Capacity building related to rainfall forecast (El Masifa and its continuation)	
• Maghreb Countries		
• Supra-regional	Measures to implement UNFCCC	Germany (page 27 ff.)
• People's Republic of China	Advanced technology dissemination center for electric power utility management, TCPM	
• Argentina and Brazil	Sustainable energy supply in Argentina and Brazil through a wider use of wind energy	
• Nepal	Biogas support programme	
• India	Integrated solar-thermal power plant	
• Argentina	Rational use of energy in the sector of town transportation (URE European Commission – Argentina Programme)	Italy (page 37 ff.)
• Western Samoa	Design of a bulletin on Climate Change in Small Island States of the South Pacific	
• China	Monitoring Unit for Environmental Projects (MUEP)	
• North Africa	Climate friendly technologies training course for North African Countries	
• South Pacific Countries	Climate changes and extreme events: prediction and adaptation measures	
• 17 Countries from	Netherlands climate change studies assistance program	Netherlands

Asia, Africa and Latin America • Bangladesh, Senegal and Brazil • Several Asian Countries • Bolivia • World wide	Workshops North-South Dialogue for implementing the UNFCCC Asian alternative energy unit (ASTAE) Inti K'anchay (Sun light) Capacity building in management of national meteorological and hydrological services	(page 43 ff.)
• Mozambique • Cape Verde • Mozambique • African Portuguese Speaking Countries and Macao	FE/UEM capacity building – Inter-university twinning arrangement for faculty engineering Assistance to energy policy implementation in cape Verde Assistance to energy policy implementation in Mozambique Use of weather forecast and climatic modelling to support the sustainable development in the PLOP and Macao territory Wave models for the PLOP's	Portugal (page 48 ff.)
• Bolivia • Global • Global	Forestry industry sector programme in Bolivia TIEMPO World Commission on Dams	Sweden (page 56 ff.)
• Indonesia • South Africa • Asia and Africa • Bangladesh	End use energy efficiency Financing rural energy in South Africa (FRESA) workshop Integrating renewables into energy systems (IRES) Oxfam disaster preparedness and management programme – phase II	United Kingdom (page 61 ff.)
• Senegal, Uganda, Zambia • Developing Countries • Global • Ethiopia • Lesotho, Malawi, Mozambique, Namibia, South Africa, Zimbabwe • ASEAN • Latin America • Kiribati • Mediterranean and Gulf Countries	start-up CDM in ACP Countries (SUCAC National Communications Support Programme on Climate Change Support to the participation of experts from ACP Countries in the IPCC process and for the dissemination of IPCC results in ACP Countries Pico-hydro village power Regional biomass energy conservation programme for Southern Africa COGEN Optimal utilisation of energy in Latin America (ALURE) Solar energy for Outer Islands EU-Mediterranean energy policy dialogue Euro-Med training project LPG markets in Mediterranean ENERGIA 98 Policy dialogue with Yemen Conference on energy investments in the Mediterranean	European Commission (page 67 ff.)

• Asia	ASEAN electricity interconnection and deregulation	
	Energy efficiency programme in Vietnam	
	Renewable energy in South-East Asia	
	Energy for sustainable development in China	
	Training of Chinese engineers	
	EU-India business development	
• Latin America	Energy economies and policies in Latin America	
	Third party financing in Argentina	
	Geothermal in Latin America and Caribbean	
	Rational use of energy in Venezuela	
	Gas distribution in Venezuela	
	ESCO's in Latin America	
• Africa	Rural electrification in Africa	
	Energy policy development in Cape Verde	
	Energy integration in South Africa	
	Energy database acquisition and management system – Benin	

AUSTRIA:

Project Title: National Cleaner Productions Centre in Managua
Host country: Nicaragua
Partner: UNIDO
Contact person:
Project Purpose: Transfer of know-how to help small and medium size industrial enterprises do develop environmentally friendly production methods
Executing Agency: UNIDO
Project period:
Financial support: 650.000 Euros, financed by Austria
➢ *Main Targets:*
To create a Centre for transfer of environmentally friendly production methods. The measures taken include the reduction of noxious emissions
➢ *Methods and Procedures:*
➢ *Experience:*
➢ *Access to financing:*
➢ *Crucial factors and conditions:*

Project Title:	Technical Assistance in barrier identification and removal for rational use of energy in SME's
Host country:	Eth'opia
Partner:	UNIDO
Contact person:	
Project Purpose:	To raise the awareness of the cost effectiveness of rational use of energy, and strengthening the capacity of the basics metals and engineering industries in the formulation and implementation of energy conservation measures.
Executing Agency: UNIDO	
Project period:	
Financial support:	550.000 Euros, financed by Austria
➢ *Main Targets:*	
➢ *Methods and Procedures:*	
➢ *Experience:*	
➢ *Access to financing:*	
➢ *Crucial factors and conditions:*	

DENMARK:

Project Title:	Energy Sector Programme, Phase 1; Capacity Building Support to the Centre for Renewable Energy (AEPC)
Host country: Nepal	
Partners:	
Ministry for Science and Technology, Nepal's Electricity Agency, Ministry for Water Resources	
Project Purpose:	
The development objective of the Energy Sector Programme is to improve the living conditions for part of the rural population in Nepal by facilitating easier access to improved environment sound energy technologies.	
Executing Agency: Danida	
Project period: 1999 – 2003 (Phase 1)	
Financial support:	
Energy Sector Programme (Phase 1): approx. USD 21 million AEPC-project: approx. USD 1.1 million	
➢ Main Objectives:	
The Energy Sector Programme's immediate objectives are: 1. Capacity building support to the existing Centre for Renewable Energy (AEPC). 2. Support to increased use of improved kitchen ovens in the rural households. 3. Support to increased local energy production from micro water electricity works. 4. Support to increased use of solar energy. 5. Support to the increased production and distribution of energy from micro-water electricity works and solar energy systems as well as support to the transmission and distribution of energy from large water electricity works to the national electricity grid through provision of support to investments.	
➢ Methods and Procedures:	
The support to AEPC focuses on creating national capacity to support and co-ordinate public and private initiatives to increase the distribution and use of sustainable energy technologies in the rural areas of Nepal. This includes technical assistance to the identification, recruitment and training of local staff to ensure the necessary professional capacity at AEPC. Technical support will also be given to the conduct of various studies on how to increase the use of renewable energies in Nepal, including solar energy. Furthermore support will be given to the development of national information campaigns for the increased use of renewable energy technologies in the rural areas.	

Project Title: Capacity building on technological and economic integration of wind energy and other relevant renewable energy technologies into the electricity systems of Pacific Island Countries (PICs)
Host country: Fiji
Partner: UNEP, SOPAC of the University of the South Pacific
Project Purpose: To increase the use of renewable energy technologies in the electricity systems of the Pacific Island Countries
Executing Agency: UNEP Collaborating Centre on Energy and Environment, RISØ National Laboratory, Denmark
Project period: July 1999 – December 2000
Financial support: USD 278,000
➢ Main Objectives: 1. Strengthen the capabilities of PICs to effectively plan and manage their energy sectors through the execution of a specialised capacity building programme on wind energy. 2. Establish a programme that integrates, both technically and economically, wind and other forms of renewable energy into the electricity systems of PICs. 3. Create a benefit for other island countries from the generalisation of the experience and international dissemination of the findings gained through the project.
➢ Methods and Procedures: 1. Data collection mission for wind energy development plan, case studies and course curriculum. 2. Development of curriculum and materials for USP's renewable energy programme. 3. Training of teachers at USP. 4. Regional seminar on project experience.

Project Title: Support to capacity building on climate change to the South Pacific Regional Environment Programme (SPREP)
Host country: Samoa
Partner: South Pacific Regional Environment Programme
Project Purpose: To strengthen the SPREP member states' knowledge and policy capacity in the area of climate change with special emphasis on renewable energy technologies.
Executing Agency: SPREP
Project period: 1998 - 2000
Financial support: approx. USD 250,000
➢ Main Objectives: To strengthen the SPREP member states' knowledge and policy capacity in the area of climate change with special emphasis on renewable energy technologies.
➢ Methods and Procedures 1. Recruitment of a regional climate change adviser to the SPREP's Climate Change Programme with co-ordination and advisory responsibilities vis-à-vis the SPREP member states. The adviser will support the development of SPREP policy and position papers and the identification of specific initiatives which contribute to the reduction of greenhouse gas emissions. 2. Workshop on environmental education with the aim of sharing experiences among SPREP member states and discuss possibilities for increased co-operation in the field of climate change. 3. Development of a climate change manual with key information which can support the decision taking of the SPREP member states and their negotiators.

FINLAND:

Project Title:	Involvement of the Public in Environmental Aspects
Host country:	The Asian ASEM-countries (Brunei, Indonesia, Malaysia, the Philippines, Singapore, Thailand, Vietnam, China, Korea)
Partner:	Asia-Europe Environmental Technology Centre, Bangkok (AEETC)
Contact person:	Ms. Eeva Furman Research Scientist Finnish Environment Institute P.O. Box 140 FIN-00251 Helsinki Tel: +358-9-40300328, fax: +358-9-40300391 E-mail: eeva.furman@vyh.fi
Project Purpose:	The overall purpose of the project is to contribute to the discussion on public participation in environmental issues within the ASEM as part of the AEETC´s activities.
Executing Agency:	AEETC and the Finnish Environment Institute (FEI)
Project period:	March 2000 - July 2002
Financial support:	The Ministry for Foreign Affairs of Finland and AEETC have agreed to implement the project. The Finnish support to the project is aprox. 2 million FIM.
Main Objectives:	The project has been drafted out as follows: * The overall objective of the activity is to provide impulse for the development of public participation practices in the ASEM countries. * The starting point is analysing public involvement and participation in environmental impact assessment and planning. *The successful completion of the activity will result in increasing emphasis on public involvement in the ASEM countries. This will eventually be reflected in new environmental legislation that will provide for public access to information and in processes through which public can participate in planning and influence decision making in environmental matters.
Methods and Procedures:	To achieve the objectives of the project, the following methods will be used: 1. Building a network between experts in the ASEM countries 2. Creation of a framework for examining existing arrangements of public involvement through which current practices of public participation in different sectors can be examined in ASEM countries. 3. Compilation of information on the policies and practices of public participation in environmental issues in the ASEM countries. The compiled material is also used for testing and developing the framework. The material presenting an overview of the current public participation in ASEM countries will be made available also on WWW-pages. 4. Identification of key issues and elements of good practice within the ASEM countries for the AEETC International Conference. Using the published sources and accumulated material from the project, a SWOT examination related to public participation in ASEM countries will be carried out. This analysis will provide the background for the identification of elements of good practice. 5. Summarising the findings and specifying principles of good practice to be presented at the ASEM-Summit.

Experience:	There are both experiences of and considerable interest in public participation related to environmental assessment and planning in many ASEM countries. A synthesis of these experiences provides a suitable background for policy level adoption of principles of good practice. As the project has not yet started, no experience from its implementation is available. The foreseen results of the project may well provide useful information for planning climate change projects on capacity building (e.g. the development of focal point networks, information gathering and presenting the results on the political level).
Access to financing:	-
Crucial factors and conditions:	The successful implementation of the project requires an active input from the ASEM countries and the NGOs. AEETC will request the ASEM countries to appoint official contacts for the project whom will form the steering group for the project and eventually approve the drafting of the Principles of Public Participation for the ASEM.

Project Title:	Egyptian Pollution Abatement Project
Host country:	Egypt
Partner:	Egyptian Environment Affairs Agency
Contact person:	Mr. Lauri Kattelus Home Office Co-ordinator Finnish Environment Institute P.O. Box 140 FIN-00251 Helsinki Tel: +358-9-40300344, Fax: +358-9-40300391 e-mail: lauri.kattelus@vyh.fi
Project Purpose:	To improve industrial environmental management
Executing Agency:	Soil and Water Ltd, Finnish Environment Institute
Project period:	1997 – 2002
Financial support:	The Ministry for Foreign Affairs of Finland: 25 million FIM
Main Objectives:	The project aims at setting up adequate mechanisms and resources to curb industrial pollution. The project incorporates sub-components for: - Industrial environmental auditing. - Support for producing industrial pollution abatement action plans. - Strengthening of administrative organisations (three regional branch offices of the Egyptian Environment Affairs Agency and the environmental management units of four governorates). - Institutional support to environmental NGOs to participate in the Egyptian Pollution Abatement Project (EPAP) - Promotion of public awareness on industrial issues through media and information campaigns. - Development of pollution abatement information databases.
Methods and Procedures:	- Writing of manuals, guidelines and handbooks. - Design of procedures and forms. - Training by seminars and on-the-job training. - Producing Pollution Abatement Action Plans for industrial establishments and for governorates.
Experience:	Industrial awareness of environmental problems is increasing, and the potential of the administration to handle industrial pollution issues is also developing. The project has succeeded in supporting the implementation of new pollution prevention legislation.
Access to financing:	-
Crucial factors and conditions:	The development of the Egyptian administration, which has been understaffed both at the national and regional level.

Project Title:	Reforestation and Natural Forest Management Project
Host country:	Indonesia
Partner:	Reforestation Technology Centre Banjar Baru, Indonesia
Contact person:	Mr. Heikki Rissanen, Managing Director, Stora Enso Forest Consulting Oy Ltd Mailing address: Kuparintie 47, 55100 Imatra, Finland Tel: +358 - 2046 24950, fax: +358 - 2046 24961 E-mail: heikki.rissanen@storaenso.com
Project Purpose:	Developing grassland reforestation methods Developing sustainable rehabilitation and management techniques of logged-over natural forests.
Executing Agency:	Ministry for Foreign Affairs of Finland, Department for International Development Co-operation
Project period:	1993 - 1998 (phases V to VII) Original start 1981.
Financial support:	Ministry for Foreign Affairs of Finland: 1,6 million US $
Main Objectives:	The objective of the project was to improve and strengthen the knowledge and skills on the management of plantations and logged-over forests in Indonesia through development of ecologically, technically, economically and socially sustainable reforestation and natural forest management system, and through dissemination of the research results to the target groups.
Methods and Procedures:	The project included a Transfer of Knowledge sub-project in order to ensure proper publication and dissemination of information collected during the lifetime of the project. The aim was to make sure that all the main findings will be permanently recorded and made available to both scientific and practical forestry organisations in Indonesia and elsewhere. The methods used included: 1. Continuous on-the-job training by preparing scientific articles and reports together with Indonesian counterparts 2. Several international and national workshops and seminars 3. Upgrading of education of local Indonesian counterparts with studies abroad financed by the project 4. Training courses on scientific analysis, writing and publishing.
Experience:	The project was carried out for 17 years and the new phases built on the experiences from the previous phases. The project demonstrated that (i) grassland reforestation is technically possible and economically feasible and that (ii) at least partial rehabilitation of a logged-over rainforest ecosystem is possible.

	Resulting from the project, a new Indonesian research publication was born and the results of the project have been spread to interested Indonesian readers and researchers via this publication.
Access to financing:	Due to the long-term experience gained and the extensive amount of published material on the project, a number of private investors and enterprises have adopted the reforestation methods developed by the project, pursuing Timber Estate development for the pulp and paper industry. An EU financed forestry development project operating in Kalimantan continues the R&D work of the project.
Crucial factors and conditions:	A long-term commitment of the project financier and a multidisciplinary, practical approach in project implementation have been crucial for the success of the project.

Project Title:	Environmental Programme in Nicaragua; Support to the implementation of the UN Framework Convention on Climate Change
Host country:	Nicaragua
Partner:	1. Ministerio del Ambiente y los Recursos Naturales de Nicaragua (MARENA) phone: 505-263 2596 fax: +505-233 4690 2. Instituto Nicaragüense de Estudios Territoriales (INETER) tel: +505-249 6986 fax: +505-249 2755 Project office in Managua: e-mail: cambioc1@ibw.com.ni
Contact person:	Ms. Lea Leskinen Senior Adviser Finnish Meteorological Institute P.O. Box 503 FIN-00101 Helsinki, Finland Phone: +358-9-1929 2226 Fax: +358-9-1929 2203 e-mail: lea.leskinen@fmi.fi
Project Purpose:	A general purpose of the programme is to alleviate environmental degradation in Nicaragua. The purpose of the Climate Change project is • to provide support to the Government of Nicaragua to implement the UN Framework Convention on Climate Change, and • to strengthen the meteorological and hydrological infrastructure in Nicaragua, in order to produce relevant information for the research on climate change as well as for applications to increase sustainable development.
• Executing Agency:	Ministry for Foreign Affairs of Finland, Department for International Development Co-operation
• Project period:	1998 – 2001
• Financial support:	Ministry for Foreign Affairs of Finland: 12.9 million FIM The Government of Nicaragua: approx. 1.1. million US $
Main Objectives:	The project is part of a wider Environmental Support Programme between Finland and Nicaragua (PANIF). Nicaragua has ratified the FCCC in 1995. Nicaragua lacks effective organisation and co-ordination in and between political formulation, and scientific and technical aspects of the FCCC. The support on the implementation on the Convention on Climate Change assists Nicaragua in organisational and institutional capacity building. The project has five main components: 1) National organisation for the implementation of climate change 2) Institutional capacity building for the implementation of FCCC mechanisms 3) Reinforcement of climatological research 4) Reinforcement of hydrological network and the applications of research 5) Awareness-raising campaigns on the prohibited substances listed in the Montreal Protocol

	Expected results include effective organisation both on the level of political formulation and scientific and technical aspects of the FCCC, reinforced networks for climatological and hydrological observations, and regular information system for the research on climate change.
Methods and Procedures:	In order to achieve the project's objectives related to capacity building, the following methods will be used: 1. Sectoral studies on the adaptation to climate change 2. Seminars and workshops for and between different stakeholders. 3. Support to the Nicaraguan participation in the IPCC and COPs. 4. Translation of relevant climate change material into Spanish; acquisition of books and equipment; access to internet, a manual for decision-makers, preparation of Climatic Atlas of Nicaragua, training material for schools and universities; 5. Regular Climatic Newsletters providing relevant and timely information especially for decision making and relevant user sectors. 6. Public awareness campaigns on climate change through regular articles and advertisements in the main newspapers and journals.
Experience:	Seminars, meetings and other contacts between different sectors including the university have increased understanding of climate change system and environmental issues. The facilities for collection, management and dissemination of climatological data have been upgraded.
Access to financing:	
Crucial factors and conditions:	Integration and commitment of MARENA and normative, institutional and educational decisions at the government level. Co-ordination with other projects and organisations working on the same sector and region. The effective and proper application of climatological information

Project Title:	The Meteorology Development Project for SADC Countries
Host country:	Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, Tanzania, Zambia and Zimbabwe
Partner:	The National Meteorological Services of the SADC countries
Contact person:	Mrs. Marianne Sågbom Chief of International Development Co-operation Finnish Meteorological Institute P.O. Box 503 FIN-00101 Helsinki, Finland Tel: +358-9-1929 2210, fax: +358-9-1929 4129 e-mail: marianne.sagbom@fmi.fi
Project Purpose:	Strengthening the National Meteorological Services of the SADC countries
Executing Agency:	World Meteorological Organization (WMO) and Finnish Meteorological Institute
Project period:	Phase I 1987-88 and Phase II 1988-93
Financial support:	Ministry for Foreign Affairs of Finland: Total 15 million USD of which 6.3 million USD (42%) for capacity building through fellowships and expert services and 8.7 million USD (68%) for strengthening the observation networks, data collection and archiving, climate data management and telecommunication systems.
Main Objectives:	To strengthen the NMS in their responsibilities to support national food production, drought monitoring and sustainable development.
Methods and Procedures:	Fellowships (72) in various specialized areas of meteorology, in country training programs and workshops: I. Meteorology was introduced for Portuguese speaking countries in Africa at the Eduardo Mondlane University in Maputo, Mozambique. II. Regional Workshops on Design/Maintenance of Regional Instrument Calibration and Maintenance Facility, on Climate Data Management, Weather Forecasting were arranged. III. Long-term (Ph.D., M.Sc., B. Sc.) and short-term Fellowships were awarded in the fields of Agrometeorology, Data Processing, WMO Class I-III, Numerical Weather Prediction, Weather Forecasting, Applied Meteorology, Instruments, Telecommunications, Climatology and Engineering. VI. Equal participation by women in the expert services, consultancies and training programs was encouraged throughout the project.
Experience:	The observation methods and the international exchange of data and products are strictly defined, coded and standardized through the WMO Member States. In practice this means that the practices, operational language and experiences of the National Meteorological Services (NMSs) are applicable to the other collegial institutions. This gives the basis for the exchange of expertise in service and training programs between all NMSs in the world in co-operation with the World Meteorological Organization. The strictly defined WMO methods, data and product exchange facilitated considerably the project implementation and resulted in a fruitful co-operation between the SADC-countries.
Access to financing:	SADC countries counterpart contributions covered logistics, offices, training and workshops facilities, secretarial assistance, fellowship candidates, counterpart staff to the experts and consultants.
Crucial factors and	The joint implementation with WMO (and through WMO with UNDP offices) was

conditions:	very relevant both regarding the services related to equipment import and the trainees travel arrangements. The Southern African Transport and Communication Commission (SATCC) responsible for meteorology programmes was a very valuable Regional Counterpart of the project.

FRANCE:

Project submitted by France N°1
Title : Support of regional networking through the "RABEDE" (Réseau régional Africain Bioressources et Energie pour le Développement et l'Environnement), an African Regional Network on Bioressources Energy for Development and Environment and through the "REC" (Réseau Ecodev Coopération)
Host region : West Africa and Central Africa
Partner: National Research Organisation , Universities and Engineer Schools, NGO's In Senegal Mali, Burkina Faso, Niger, Ivory Coast, Benin, Togo, Cameroon, Congo. and French teams in relevant areas (CIRAD , INRA, CNRS,etc.) and private companies etc.)
Contact person : M. Youba Sokona ENDA Sénégal Consult RABEDE on www.enda.sn/energie/rabede.htm
Executing agency/ Funding Agency : Ministère des Affaires Etrangères (Coopération)
Project period and costs: Started in 1992 and funded by several budgets About 0.9 M Euro

Requested specific information:

➢ What are the project's main targets? - More efficient use of regional capacities and capacity building, to serve at a regional level for more sustainable developments. -Orient research toward practical applications useful for the sustainable development of Africa driven by country's needs. - The aim of the project was therefore to support local teams to acquire capacities necessary to participate more fully and in a more efficient way to planning and implementing actions for more sustainable developments, including limitation of greenhouse gas emissions and adaptation to climate change. - Identifying of projects for sustainable development.
➢ Which instruments, methods and procedures are applied by the project in order to respond to the concrete needs of users and beneficiaries on capacity building? Many African countries suffer from insufficient technical and planning skill. There are only a few technical centres and specialised teams trained in sustainable energy, in sustainable land use, land use change, forestry and biomass conversion, or in sustainable city management and planning (energy efficient buildings, waste management etc..). Contacts of scientists and engineers with local small or large scale industries are usually also insufficiently developed. It was therefore proposed to specialised teams dealing with -- wood for building and selection of poles for power transmission, -- production and use of non conventional oil products and essentials oils, -- efficient use of energy in buildings, -- use of MSW , and biomass for energy etc.) -- development of technologies useful for village developments (efficient village motorization, decentralised electricity generation and distribution, conservation and transformation of local bioresources etc.) to work on a regional basis with teams trying to integrate these different aspects such as -- planning for efficient use energy and water for more sustainable developments in Africa,

-- integrated approaches for more sustainable management in grassland and semi arid country sides

integrated approaches for more sustainable management in forest zones .

➢ How does the project support access to financing for capacity building?

Teams were

-- to prepare 3 year work programs,

-- to work with projects or end users (with cities for municipal solid waste management, with wood industries for wood drying, with utilities for studies on mechanical characteristics of local wood for power and telephone transmission, manufacturers of beehive charcoal briquettes, industries etc…

-- to publish their results in scientific or technical journals,

A special Journal , the " Bulletin Africain bioressources, énergie, développement , environnement" has been launched in 1992 and distributed 3 time a year in West and Central Africa countries. It contains peer reviewed and non-peer reviewed articles. It provides an opportunity for African specialists to know who else in Africa is working in this field and to work together in order to create a local capacity to deal with planning and actions related with climate change and sustainable development.

This journal is also to help decision-maker, mainly from French speaking countries of Africa, to get a better understanding on the issues related with climate change and sustainable development. It is also meant to inform African decision makers on existing African competent teams which could help them in scientific and technical assessments, in research, in planning, in technology transfer and technology co-operation, in projects etc…

➢ Other ideas/information:

It must be underlined here that contributors originally not involved in this network are most welcome to publish papers, in French or English, in the

"Bulletin Africain bioressource, énergie , développement , environnement ".

Contact ENDA Energie 54 Rue Carnot BP 33 70 Dakar Sénégal

Email energy2@enda.sn

Other donors are welcome to consolidate the existing teams, or to add other teams when necessary and more generally to support and to promote the development of African capacities related with sustainable development.

Project submitted by France N°2	
Title:	COAL-BAGASSE POWER PLANT of Belle Vue
Host region:	MAURITIUS
Partner:	Consortium (SIDEC + HAREL) + FGEF funding
Contact person:	Catherine GARRETA (FGEF)
Executing agency:	French Global Environment Facility (FGEF)
Project period and costs:	1/1/1999 – 31/12/2002. 100 M Euros Capacity Building 0,5 M Euros (FGEF)

Requested specific information:

➢ What are the project's main targets?

-- In a context of increasing energy demand, the government of Mauritius wanted to increase the use of local resources and to promote the use of the bagasse in power production.

-- By using residues from the sugar industry for power generation in place of coal the country will be able to reduce both the importation of fuel and greenhouse gas emissions.

-- The new power plant is part of the modernisation of the sugar industry in Mauritius which envisages to get access to new markets, in particular in Europe.

-- The ambitious capacity building programme will allow technicians and managers to get familiar with the management of high performing energy producing installations using coal and biomass.

-- The project promoters, as well as the authorities of Mauritius expect to develop a maurician competence and know-how for energetic use of bagasse.

➢ Which instruments, methods and procedures are applied by the project in order to respond to the concrete needs of users and beneficiaries on capacity building?

The Thermal Company of Belle Vue (CTBV) has planned an ambitious programme of formation for future managers and technicians of the power plant. This will, in the very short term, allow the entire power plant to be run only by specialists from Mauritius. The programme is to train, during 3 and 6 months, 45 persons, on both theoretical and practical issues.

➢ Which positive experience has been gained up to now (lessons learned / best practices) and how is it diffused / applied in other projects?

In order to add value to the organisational and institutional framework that has been built for the project, the CTBV, supported by the FGEF, will make a synthesis of the genesis of the project. This synthesis is to be disseminated and will in particular comprise the analysis of the interests and strategies of the main stakeholders, the history of the operation, an analysis of the institutional context of the project, including the regulation aspects, and a methodological guide for future projects, in Mauritius or other developing countries.

The FGEF funding allows several other capacity building activities to promote the dissemination of such environmentally friendly technologies.; organisation of seminars on the use of bagasse for heat and power production, either in Mauritius or in other countries which may be interested by adopting similar technologies. (notably in India); visits of Belle Vue by delegates from potentially interested users etc…

The project has also been approved by France for participating to the pilot phase of AIJ.

➢ How does the project support access to financing for capacity building? The project will allow to reduce greenhouse gas emissions and therefore benefited from funds allocated by the by the FGEF for capacity building. These funds are allocated parallel to the set up of the power plant.
With respect to capacity building, which factors and conditions are crucial to the success of the project? The success of such an arrangement between an electricity company and a sugar industry, which may only supply part of the need of the fuel for electricity generation, is very much depending on the national energy policy of the country where the project takes place. It is also depending on agreements to be reached between the sugar industry and the power producing company Places willing to use bagasse for power generation must be able to get also coal (or other biomass) to supplement the supply of bagasse, either by train, boat or trucks.
➢ Do you know of other, similar projects? Please indicate. No
➢ Other ideas/information: Depending of the needs of countries and users such projects may in some cases be simplified. Coal may also be replaced by other biomass residues.

Project submitted by France N°3	
Title: Management of Forest in dry lands (South of Mali) for sustainable firewood supply of cities (Part of the "Household Energy Project")	
Host region:	Mali (Sahel)
Partners:	The Republic of Mali
Contact person:	Ministry of Energy and Mines and Ministry of Rural Development in Mali
Executing agency:	Agence Française de Développement
Project period and costs: 3 years starting in 1997 2,5 million Euros in this project . (10% research , 90% training and capacity building)	
Total financing plan of the "Household energy project" including the contribution from the of GEF, the Netherlands, France, Germany, Mali: $ 11,2 million	

Requested specific information:

➢ What are the project's main targets?

The ultimate objective of project is to maintain the firewood supply of Bamako and several other important cities in Mali (Sikasso is the main city considered in this project).

It has been proven that to day the total annual firewood harvested does not exceed the total annual forest growth. But at present non planned firewood harvesting is leading to overexploitation of some forests and to deforestation. Therefore the aim of the project is to promote sustainable management of forests and to orient wood harvesting towards forests where it is possible to do so without compromising the existence of the stand (where the quantity of harvested wood does not exceed the forest growth)

➢ Which instruments, methods and procedures are applied by the project in order to respond to the concrete needs of users and beneficiaries on capacity building?

The project is part of a more general change in the forestry policy in Mali; centralised forest management is to be taken over by local communities which are to benefit also through this change from the revenues generated by sustainable management of "their" forests .

Establishing management plans of forests with local communities, teaching local communities how to manage their forests, establishing local firewood markets which benefit from reduced taxation as only sustainable harvest can be practised there, monitoring of forest management by local forest services etc..are the main instruments to achieve this major change.

➢ Which positive experience has been gained up to now (lessons learned / best practices) and how is it diffused / applied in other projects?

The project is based on experience gained from a previous and similar project in Niger. The positive outcome of the latter programme led to this project in Mali. Similar changes could be initiated in other semi -arid countries .

➢ How does the project support access to financing for capacity building?

Training and capacity building for local communities is delivered only to villages and local communities on a voluntary basis. Increased revenues from the forests for communities willing to take part in this programme is an incentive for their active participation.

➢ With respect to capacity building, which factors and conditions are crucial to the success of the project?

Prior to the implementing of that project a major legislative change had to be taken to allow this programme to be envisaged ; centralised forest management had to become decentralised and the forest revenue were to benefit no longer to the national budget but to local communities.
➢ Do you know of other, similar projects? Please indicate. Other projects of this kind were undertaken in Niger and in other areas in Mali Complementary actions include a better use of charcoal waste by briquetting these residues (Mali) cf. Project N°1.

Project submitted by France N°4	
Title: IMPROVEMENT OF ENERGY EFFICIENCY IN HOUSEHOLDS	
Host region:	Lebanon
Partner:	Private sector for the constructions
	FGEF for the extra costs related to energy saving
Contact Person	Catherine Garreta French GEF
Executing agency:	French Global Environment Fund (FGEF)
Project period and costs:	1997 – 2002
	Private sector 8.8 million Euro / FGEF 0.88 million Euro

Requested specific information:

➢ What are the project's main targets?

1. To demonstrate that it is possible, with limited extra cost and investments, to both reduce the energyconsumption in the household sector and to improve the comfort. The demonstration will apply to domestic electrical appliances and to the building conception. The main target is collective housing of medium standard (with no central heating and no air conditioning).
2. To limit or reduce the importation of oil which would otherwise have become necessary due to increasing energy consumption in the housing sector.
3. To limit the increase of the demand of the peak load electricity in order to reduce the necessity to build new fossil fuel power plants;
4. To reduce, in the housing sector, CO2 emissions from fossil fuels due to lower energy consumption;
5. To demonstrate the efficiency of a global approach coupling construction of buildings and energy efficiency.

➢ Which instruments, methods and procedures are applied by the project in order to respond to the concrete needs of users and beneficiaries on capacity building?

In order to initiate a policy for energy management in households at a national level it is necessary to associate public institutions and private enterprises which build the buildings

Actions to be taken comprise :

- the collection, and a first treatment of meteorological data, in a form which will allow them to be used afterwards by conceptors and project managers;
- the elaboration, in connection with architects and engineer organisations, of simplified tools for the thermal conception of buildings. These tools are to be ready for the training sessions;
- actions related to domestic electric appliances, like those undertaken in OECD countries, seeking to promote electricity savings (lamps with low energy consumption, water heaters, air conditioners), with large building operators (Alissar, Solidere). This starts with thermal pre-diagnostics of operations at the predevelopment phase;
- organising technical seminars on new tools available for air conditioning;
- a support for the elaboration of a temporary thermal regulation of buildings.

➢ Which positive experience has been gained up to now (lessons learned / best practices) and how is it diffused / applied in other projects?

The co-ordinator of this project is the ALME (the Lebanese Agency for Energy Management). Its participation in the project will strengthen its experience and its capacity to deal with concrete actions in the energy management sector.

The awareness of the decision-makers involved in different ministries (Environment, Buildings, Energy) and the

formation of operators through professional seminars are to allow local replication of such projects due to the appropriation of the energy management concepts as well as the technical, financial and institutional tools by the different stakeholders.
➢ How does the project support access to financing for capacity building? The funding is allocated parallel to the implementation of the project.
➢ With respect to capacity building, which factors and conditions are crucial to the success of the project? The association of private enterprises and public institutions.
➢ Do you know of other, similar projects? Please indicate. A project on energy efficiency in building and energy management in domestic electronic appliances is also supported by the FGEF in China. Complementary projects are Low cost and efficient solar heater manufacturing in Tunisia and dissemination of low electricity consuming refrigerator in Palestine.

Project submitted by France: N°5	
TITLE: CAPACITY BUILDING RELATED TO RAINFALL FORECAST (EL MASIFA AND ITS CONTINUATION)	
Host region:	Maghreb countries
Partners:	MEDIAS, Météo-France, and National Met services (NMS) of Tunisia, Algeria and Morocco
Contact person:	J.P. Piedelièvre , Météo-France
Executing agency:	Medias (see web site http ://medias/)
Project period and costs: 1995-1997 ; Total : 2M Euro	

Requested specific information:

➢ What are the project's main targets?

The aim of the project is:

- a better understanding of the seasonal precipitation over the Maghreb, by using numerical climate models developed by Météo-France and statistic adaptation of the outputs;
- to enable countries involved in the project to produce and manage such forecasts by NMSs, within the normal framework of international co-operation regarding this issue.

➢ Which instruments, methods and procedures are applied by the project in order to respond to the concrete needs of users and beneficiaries on capacity building?

The users needs are : availability of a seasonal forecast of rainfall for the Maghreb countries.

The project aimed

- to enable National Meteorological Service experts to provide the best forecast according to the state of the art (including equipments for appropriate data processing)
- to make them properly understand the scientific methods, mechanisms and limits of such forecasts.

This is done by organising visits of scientists for on the job training and by operationally providing the forecasts to the national authorities.

➢ Which positive experience has been gained up to now (lessons learned / best practices) and how is it diffused / applied in other projects?

Apart from learning how to produce seasonal forecasts, the project allowed scientists to better understand the scientific limits and then the level of usefulness and usability of the forecasts.

These results are used in other projects (see hereafter).

➢ How does the project support access to financing for capacity building?

The project funds are for countries from the Magrheb and to develop capacities in weather forecast :

- implementation of the necessary equipment,
- development of local capacity by appropriate training.

➢ With respect to capacity building, which factors and conditions are crucial to the success of the project?

1) Trained experts must be in direct contact with final users.

2) Clear assessment of the initial technical and scientific level of the partners, and of the appropriate steps to reach the technical and scientific level necessary for project implementation are essential. Considering in a realistic way how to reach the desired level according to the financial and time constraints.

3) To ensure that the scientific environment in which the trained experts are involved in will allow them to get a complete scientific understanding of the issue.

4) In order to guarantee that the activities which were developed within the project will continue after the project, it is necessary to give appropriate consideration, during the project, to the sustainability of the technical support which will remain necessary after completion of the project. (in other words, consider post-project success).

➢ Other ideas/information:

The activity developed by the project has been fully operational in Morocco since 1998.

It was considered by partners involved as having been very successful. Tunisia is asking to benefit from the same type capacity building

GERMANY:

Project Title: Measures to Implement the UNFCCC	
Host country:	supraregional
Partner:	Ministries for Environment and Energy, Research Institutions
Contact person:	Holger Liptow GTZ Postfach 5180 65726 Eschborn, Germany Tel. +49 – 6196 – 79 – 1352 Fax +49 – 6196 – 79 – 6320 Email: Holger.Liptow@t-online.de
Project Purpose:	To enable relevant institutions in selected developing countries to bring to the attention of decision-makers strategies and drafts of national action programmes and projects for the reduction and avoidance of greenhouse gas emissions.
Executing Agency:	Deutsche Gesellschaft fur Technische Zusammenarbeit GmbH (GTZ) Germany Technical Co-operation
Project period:	10/1993 to 12/2001
Financial support:	DM 15,0 Mio

Requested specific information:

➢ Main Targets:

Major results of the project:

1. Exemplary political recommendations and strategies, based on country studies, have been prepared for the reduction and elimination of greenhouse gas emissions.
2. Project approaches for the effective and feasible protection of the climate (reduction of greenhouse emissions) have been prepared and are ready for implementation.
3. Co-operation relationships have been established between the relevant institutions and other important players for the implementation of climate protection measures in selected developing countries.
4. Experience gained has continually flowed into the international process and into German Development Co-operation.

➢ Methods and Procedures:

The programme has been supporting more than 20 individual projects in 18 countries supplemented by three supra-regional measures. All of these measures were oriented towards capacity building, since they had not only the task of elaborating studies but as well to build capacity of local and regional experts. In addition, institutional capacities of the partner organisation were also strengthened. Local experts, frequently seconded by several institution, worked together on strategies and policy recommendation as well as drafts for climate change oriented programmes and projects. The local teams received advisory support from German and international experts on a short term basis. This support was deliberately restricted to advice and advanced on-the-jog-training in order to strengthen the independence and self reliance of the partner organisation.

The capacity building activities were, of cause, not standardised but rather tailor made to meet the specific requirements of the predetermined project goal. Furthermore, capacity building took into account the level of existing local expertise and institutional structure and arrangements. Elements of capacity building were workshops and seminars, study tours, individual training courses, as well as on-the-job training through the advisory service of the seconded short-term experts.

➢ Experience:

The results of the various projects have clearly demonstrated that national experts are in a position to elaborate and present internationally highly acceptable studies and recommendation to address climate change in their respective countries. The results were particular useful when the national experts had a high degree of academic freedom to present their findings eg mitigation options and strategy proposals.

It was most important that the national experts had the opportunity to discuss with the supporting international counterparts their approaches, data, interim reports and final results. National workshop in combination with international training workshops were very helpful in most cases. Irrespective of the special climate change orientated capacity building

➢ Access to financing:

Capacity Building is an integral part of all individual project concept if not to say the main aim of the project. Therefore, financing for capacity building was and will be an indispensable part of the budgeting of any project

➢ Crucial factors and conditions:

The main factor determining successful capacity building is ownership of the project by the national project organisation and the other relevant stakeholders as well as the motivation of all team members having an assignment in the project. Furthermore, all external advisors need to take there role as facilitators, not as driven managers, serious to foster the understanding that national experts can achieve respectable results.

Any training course within the cause of the project should be well geared to the immediate tasks of the project and should result in benefits for the current work of the national experts.

Project Title:	Advanced Technology Dissemination Center for Electric Power Utility Management, TCPM
Host country:	Peoples Republic of China
Partner and Contact Person:	Changjun Xie Vice President China Longyuan Power Group Corporation (CLYPG) No. 1, Lane 2, Baiguang Road Xuanwu District, Beijing 100761 Beijing, 100081 / PR CHINA
Project Purpose:	The main task of the project is to provide the Chinese counterparts with un-biased advice on the benefits and limitations of the various technologies concerning coal fired power plants. By means of realisation a significant reduction of CO_2 emissions and other coal-firing related pollution can be reached.
Executing Agency:	Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH Germany Technical Co-operation
Project period:	10/1995 – 09/2002
Financial support:	DM 6,6 Mio

Requested specific information:

➢ Main Targets:

The efficiency of most Chinese coal-fired power plants is far below those in operation in OECD-countries (in China 415 g coal/kWh in OECD-countries 285 g coal/kWh). Therefore, the CO_2-emissions per unit (kWh) are much above average.

The direct recipients are not only the power plants or utilities but mainly organisations which are carrying out consultancy and training themselves. This implementing agency is specialist research and consulting institution of the State Power Corporation of China, the successor of Ministry of Electric Power, which offer consulting services to the utilities China-wide, such as TPRI (Thermal Power Research Institute, Xian).

The main task is to improve the qualification and capabilities of these institutions so that they can carry out their work more effectively. They are to continue by themselves, beyond the project frame, the inputs introduced and trained in the projects to the benefit of all utilities. This is especially important for the poorer power utilities and less developed regions who are not well equipped and do not have access to all necessary know-how. Frequent technical and managerial support is needed most here, as regional pollution is very severe and causes health problems.

➢ Methods and Procedures:

Within the project a variety of measures is applied to find an adapted practical solution step by step and to promote the technical implementation. The major elements of this co-operation with respect to capacity building are:

- Seminars about the special subjects to transfer theoretical know-how and practical experience from Germany, addressing all experts and decision-makers in China employed in the field of electric power generation;
- Study tours to investigate the specific situation and the state-of-the-art with the partner and to promote contacts with the relevant institutions to induce further exchange;
- Delivery of technical equipment and materials to enable the partner institute to carry out improved consulting to the utilities;
- Training of Chinese experts, especially for application of the provided equipment;
- Practical in-plant consulting to apply the know-how, to train the partner and to provide a motivating example for other utilities or plants;
- Documentation about the activities or exemplary case studies which are distributed China-wide by the partner;
- Technical information and contacts to relevant institutions and firms are provided to support the work of the partner

institute and the utilities;

- Joint planning and design of technical solutions as exemplary applications;
- Studies by Chinese experts in Germany of specific problems;
- Joint consultancy to utilities, especially in the case of introduction of new technologies financed by the German government to retrofit power plants, activities mainly carried by the counterpart organisations and continuing far beyond the German contribution;
- Distribution of the information and experiences China-wide by publications and by holding seminars and training workshops;
- Application of the know-how and the equipment by the partner institute in providing consultancy to the utilities and power plants;
- Support of utilities and the ministry in connection with the introduction of new technologies and the implementation of cost-effective and adapted solutions;
- Development of adapted technologies available and feasible for China.

A very central task of these Chinese technical advisors within TPRI is to disseminate the information China-wide to those experts and institutions responsible and interested. This multiplier function gives the project a very high level of efficiency and impact on development.

Every activity, such as seminars, consultations etc., is documented in booklets and distributed to all relevant institutions like ministries, utilities manufacturers, universities etc. This includes the practical experience gained with the demonstration applications which are intended to motivate others to follow suit.

➢ Experience:

About 3 to 5 seminars in China and 3 study tours to German utilities were organised every year by German experts together with their counterparts at the centre. The information to be transferred focuses on various special topics in the fields of utility and power plant management, operation improvement, energy saving measures, maintenance, reliability, network problems, monitoring and control technologies and many others.

More than 300 managers from all large fossil power plants and all utilities have already taken part and will participate in seminars and round tables as part of the project.

In addition to these information activities consultancy services were carried out in cases where new technologies can appropriately be introduced. Concrete help on the spot is supporting the Chinese utilities in realising implementation and is building capacities.

Chinese leading power plant managers and chief engineers are acquainted with the newest technologies applicable for their specific needs in accordance with financial constrains. This led to real measures implemented by the Chinese partner organisation especially in the field of energy efficiency and environment.

➢ Access to financing:

Capacity Building is an integral part of the project concept if not to say the main aim of the project. Therefore, financing for capacity building is automatically built in the project budget.

➢ Crucial factors and conditions:

The main factor determining successful capacity building is ownership of the project by the national project organisation and the other relevant stakeholders as well as the motivation of all team members having an assignment in the project. Furthermore, all external advisors need to take their role as facilitators - not as driven managers - serious to foster the understanding that national experts can achieve respectable results.

Any training course within the cause of the project should be well geared to the immediate tasks of the project and should result in benefits for the current work of the national experts.

Furthermore, environmental legislation need to be strenghtened continues to keep the high motivation of and the incentive for the involved organisations, their management and staff.

Project Title:	Sustainable Energy Supply in Argentina and Brazil through a Wider Use of Wind Energy.
Host country:	Argentina and Brazil
Partner:	In Argentina: Asociacion Argentina de Energie Eolica (AAEE), Buenos Aires; Fundación Federal, Buenos Aires; Universidad Tecnológica Nacional; Universidad Nacional Patagónica San Juan Bosco. In Brazil: Universidade Federal do Rio de Janeiro (UFRJ); Centro de Pesquisas de Energia Elétrica (CEPEL), Rio de Janeiro; Companhia Paranaense de Energie (COPEL), Curitiba; Companhia Hidro Elétrico do S. Francisco (CHESF), Recife; Universidade Federal do Ceará, Fortaleza; Secretaria de Energia do Rio Grande do Sul. In Germany: Deutsches Windenergie-Institut (DEWI), Wilhelmshaven; Institut für Solare Energieversorgungstechnik (ISET), Kassel
Contact person:	Klaus Knecht, Master of Economics. Project Manager Renewable Energy Carl Duisberg Gesellschaft e.V. Lützowufer 6-9 10785 Berlin, Germany Tel. +49 – 30 – 25482 - 110 Fax +49 – 30 – 25482 - 103 Email: KnechtK@cdg.de
Project Purpose:	The aim is to promote the development and realisation of concepts and the implementation of projects using economical wind energy to generate electricity in an environmentally-friendly way. This will be achieved through specific training programmes with various interactive measures for the private sector, especially private electricity producers, but also public electricity utilities, and private developers, consultants and research institutions. Decision-makers from energy departments and those responsible for development policy in public authorities and companies will be included in the advanced training project alongside specialists from the field of finance. In this way the CDG's advanced training initiatives complement those of the European wind energy industry and the interactive measures undertaken by the Argentinian and Brazilian partner institutions.
Executing Agency:	Carl Duisberg Gesellschaft e.V.; Section for Protection of the Environment and Natural Resources.
Project period:	January 1999 to December 2001
Financial support:	Contribution from German Federal Ministry for Economic Cooperation (BMZ): DM 1,035,000.00 Partner contributions: DM 266,000.00 Contributions from third parties: DM 577,000.00 (some still have to be secured) Total costs: DM 1,878,000.00

Requested specific information:

Main Targets: Various professional groups will be brought together through a range of diffe-rent initiatives. This interdisciplinary cooperation will be complemented by an exchange of experience on an international scale, where the aim will be not only to transfer know-how from the North to the South, but also to promote the exchange of experience and cooperation between Argentina and Brazil. Teaching technical know-how and communicating manage-ment strategies will be given equal attention. The aim will be to strengthen technical and organisational competence in designing and implementing wind energy projects on the one hand, and transferring and developing innovative concepts for technological cooperation on the other. In the long-term this should lead to close cooperation in the manufacture of wind energy converters under licence.

With this „Capacity Building Project" the Carl Duisberg Gesellschaft e.V. and its project partners want to help establish

an environmentally-friendly, economical and technically reliable electricity supply in the partner countries.
Methods and Procedures: Around 30 individual measures have been planned, including workshops, seminars, dialogue with experts, individual country studies, study trips, business meetings, press conferences, development of training modules, implementation of basic courses at Argentinian and Brazilian universities, refresher courses, and evaluations.
Experience: Up to now two business meetings have taken place with representatives from the industry, as well as a detailed planning workshop and two three-week workshops on the subject of wind measurement and Wind Atlas Analysis and Application Programme (WAsP). Interest in the project has been constantly increasing in Argentina and Brazil. Initially only one institution in each country had been envisaged as a project partner, but now project teams in each country have been formed to coordinate and prepare the next advanced training programmes and to join with the CDG to carry them out.
Access to financing: 55% of funds come from the German Federal Ministry for Economic Cooperation and Development (BMZ). It appears that partner contributions will be higher than the 14% originally calculated. Some of the funds required from third parties still have to be secured.
Crucial factors and conditions: We will continue to improve coordination with the advanced training initiatives of the Deutschen Gesellschaft für Technische Zusammenarbeit (German Society for Technical Cooperation, GTZ) and particularly with the German wind energy industry.

Project title:	Biogas Support Programme
Host country	Nepal
Partner country	Germany
Contact person:	Mr. Josef Gamperl, KfW Palmengartenstr. 5-9 60325 Frankfurt Tel. +49 - 69 – 7431 - 2273 Fax +49 – 69 – 7431 - 3746 Email: Josef.Gamperl@kfw.de other contacts see KfW homepage: http://www.kfw.de
Executing agency:	KfW (Kreditanstalt für Wiederaufbau), Germany (Financial Co-operation) and Netherlands Development Organisation and Nepal financial and technical co-operation
Project purpose:	Energy supply (cooking and lighting) for rural farmer households
Investment cost:	DM 30,5 Mio (Phase I), DM 59,6 Mio (Phase II)
Finance:	KfW (Phase I: DM 14 Mio; Phase II: 14,5 Mio), complemented by funds from Netherlands Development Assistance (NEDA), Agricultural Development Bank of Nepal (ADB/N), Government of Nepal, and investor's own funds.

Requested specific information:

1. Brief Description of the Project

The biogas support programme was launched in 1975 and gained momentum in the nineties with the assistance of the Netherlands (since 1992) and grants from German Financial Co-operation (since 1997). Altogether some 50,000 individual small biogas plants in rural farmer households have been installed since the start of the programme, 36,000 alone since 1997, and it is expected that until 2003 another 60,000 biogas digesters will be added. The overall technical potential in Nepal is estimated to about 1.3 million installations, while the economic potential, under consideration of the purchasing power and the prices of alternative energy sources, amounts to some 300,000. Limitations for demand arise from the following considerations: For the minimum plant size, dung of at least two to three cows must be available. Poorer families could benefit from biogas only through community plants. Sites above an altitude of roughly 2,000 meters are not suitable, because it is too cold for dung fermentation.

2. Relevance of Project Type

The principal objective of the programme is to promote the wide-scale use of biogas as a substitute for wood, agricultural residues, animal dung and kerosene that is presently used for the lighting and cooking needs of most rural households. The rising demand for energy due to the rapidly growing population has helped accelerate deforestation, soil degradation and generally environmental decline in Nepal. In addition, use of biomass fuels and kerosene has significant negative impacts on health due to indoor pollution and smoke.

The technology of small-scale biogas production has proven over many years in various countries to be simple and robust; its application is especially advantageous in rural areas. The biogas plants consist of a subsurface tank to be filled with organic substances (mainly cow dung and, to some extent human excrements, where cultural attitudes allow such a solution), and a pipeline system to the farmer's dwelling to convey the gas produced to cookers and lamps. The fermented sludge will be composted and can be used as fertiliser. Thus, biogas plant output substitutes firewood from forest areas or kerosene for burning, as well as chemical fertilisers. Therefore it helps to avoid the deforestation and the emission of CO_2 from burning wood (unless the same carbon content is again absorbed by reforestation) or kerosene, as well as from the production of fertiliser. The carbon in the biogas stems only from the natural CO_2-cycle and therefore does not increase the overall balance. Besides the benefit for the climate and local environment there are also positive effects for better health conditions in the farmers' houses.

3. Special Aspects: Capacity Building

The programme has helped open the market for production of biogas plants in Nepal. The plants are being built by private local firms, but farmers can participate in the construction to reduce the cost. Almost all construction material is being manufactured in Nepal. By the year 1999, as a direct result of the induced market development, around 40 private companies had entered the biogas construction business. All participating companies must meet strict production and service quality standards. As a result of competition, quality control measures, and technical design modifications, overall costs of biogas plants have decreased by some 30% since the inception of the programme.

Another important feature has been the innovative financial engineering which includes credits, grants and own funds of farmers. A loan and subsidy programme was structured that is targeted at small and medium-scale farmers. Recently the subsidy was fixed so as to restrict the construction of oversized plants. In the longer term, it is envisaged to decrease and eventually phase out the subsidy component. Providing uniform and fixed subsidy has greatly simplified the administration of the programme and helped develop a successful financial mechanism for the commercialisation of the programme.

Likewise, the programme has strengthened the institutional framework for wide-scale commercialisation of biogas systems. Apart from the long-term support for local banks like ADB/N, through which the credits to local farmers have been channelled, it helped establish the Alternative Energy Promotion Centre (AEPC), whose mission is to support alternative energy applications in Nepal. Moreover, the foundation of the Nepal Biogas Promotion Group, an association of companies that produce biogas plants, and the formation of an NGO Coalition for Biogas and Alternative Energy Promotion has been supported by the programme.

Project title:	Integrated solar-thermal power plant
Host country:	India, State of Rajasthan
Partner country:	Germany
Contact person:	Mr. Josef Gamperl, KfW Palmengartenstr. 5-9 60325 Frankfurt Tel. +49 – 69 – 7431 - 2273 Fax +49 - 69 - 7431 - 3746 Email: Josef.Gamperl@kfw.de other contacts see KfW homepage: http://www.kfw.de
Executing Agency:	KfW (Kreditanstalt für Wiederaufbau) Germany Financial Co-operation
Project purpose:	(a) To demonstrate the operational viability of parabolic trough solar thermal power generation in India; (b) promote commercial development of solar thermal technology and cost reduction; and (c) help reduce greenhouse gas (GHG) global emissions in the short and longer term.
Investment cost:	US $ 200 million
Finance:	KfW: US $ 125 million GEF: US $ 49 million Indian counterpart financing: US $ 26

Requested specific information:

1. Brief Description of the Project

The project involves: (a) Construction by the private sector of a solar thermal/fossil-fuel hybrid power plant of about 140MW incorporating a parabolic trough solar thermal field of 35MW to 40 MW; and (b) a Technical assistance package to support commercialisation of solar thermal technology. The solar thermal/hybrid power station will comprise: (i) a solar field with a collection area of 219,000 m^2 to support a 35MWe to 40MWe solar thermal plant; and (ii) a power block based on mature fossil fuel technology. The proposed project will be sited at Mathania, near Jodhpur, Rajasthan in an arid region with a high insolation level of about 5.8 kWh/m^2 daily average. The final choice of the fossil-fired power block will be left to the bidders, a likely design choice, however, is an Integrated Solar Combined Cycle (ISCC) involving the integrated operation of the parabolic trough solar plant with a combined cycle gas turbine using fossil fuels such as naphtha or natural gas. The solar thermal/hybrid station will operate as a base load plant with an expected plant load factor of 80%. The solar-thermal component will generate approx. 10% of the total plant power output.

2. Relevance of Project Type

Solar thermal technology has proven its technical maturity in a number of power plants in the USA with an operation history of more than 10 years. However, the capital cost of solar thermal power generation technologies is still significantly higher than fossil-based conventional power, although costs have been falling sharply from $5,000 per kW for the first solar thermal plant, to $2,900 for the latest plant in California. The combination of a renewable energy source with a highly efficient conventional plant represents a new concept for making the use of this renewable form more attractive commercially. The project is expected to be the first in a multi-country series of investments. Similar projects are being planned in Mexico, Morocco, and Egypt. It is expected that the combined effects of these projects will be to accelerate the process of cost reduction, demonstrate the technical performance of the technology in a wider range of climate and market conditions, and create a sustainable market for parabolic trough solar thermal technology.

The project is expected to result in avoided emissions of about 12 million tonnes of CO_2 over the operating life of the solar thermal plant relative to generation from a similar-sized coal-fired power station. This translates into avoidance costs of about $10 per tonne CO_2 based on the present value of incremental lifetime using at a discount rate of 12% p.a.

3. Special Aspects: Capacity Building

The project will provide technical assistance to ensure that adequate institutional and logistical support for the technology is available for future expansion of solar thermal power. Specifically, funds will be made available for: i) the promotion of solar thermal technologies among potential investors; ii) operation and maintenance efficiency improvement program; (iii) monitoring and evaluation of the project and of overall solar thermal program in India; (iv) staff training and development of a local consultancy base; v) upgrading of test facilities; and vi) improved collection and measurement of insolation data and other solar resource mapping activities.

Demonstrating the solar plant's operational viability under Indian conditions is expected to result in follow-up investments by the private sector both in the manufacture of the solar field components and in larger solar stations within India. Insights into local design and operating factors such as meteorological and grid conditions, and use of available back-up fuels, are expected to lead to its replication under Indian conditions and elsewhere , opening up avenues for larger deployment of solar power plants in India and other countries with limited access to cheap competing fuels. Creation of demand for large scale production of solar facilities will in turn lead to reductions in costs of equipment supply and operation. It is also expected to revive and sustain the interest of the international business and scientific community in improving systems designs and operations of solar thermal plants.

Moreover, the project is linked to an energy sector reform programme in the state of Rajasthan which is supported by the World Bank and KfW, and which calls for commercialising the sector and attracting private sector investments and management skills into all new generation facilities. Accordingly, the solar thermal station will be operated by a private contractor/operator for a limited period of time.

ITALY:

Project Title:	Rational use of energy in the sector of town transportation (URE European Commission-Argentina Programme)
Host country:	Argentina
Partner:	ENEA (Italy); ICAEN (Spain); Secretaria de Energia (Argentina)
Contact person:	Dr Antonio LIOI ENEA - ERG/SIRE CR Casaccia Via Anguillarese, 301 00060-ROMA Tel.+39-06-304834749 e-mail: lioi@casaccia.enea.it
Project Purpose:	Evaluation of the potential fuel saving in the transportation of passengers
Executing Agency:	ENEA, Italian National Agency for New Technologies, Energy and the Environment
Project period:	1995-1997
Financial support:	27.600 ECU (European Commission, DGI), 4.300 ECU (Italy, ENEA).
Main Targets: To demonstrate to the transportation companies and to the local authorities the advantages deriving from an appropriate training of the bus drivers.	
➢ Methods and Procedures: 1. Identification of transportation companies to involve in the initiative; 2. Designing, collection and elaboration of a data system. The system was installed in the service bus; 3. Collection and assessment of fuel consumption before the training; 4. Training of 40 drivers. The trainers were local experts; 5. Collection of data after the training; 6. Assessing of data; 7. Dissemination of the results to the company and to the local Authorities.	
➢ Experience: Positive in terms of involvement of the local partners and in terms of results (about 20% saving of energy and of consequent reduction in CO2 emissions).	
➢ Access to financing: the project experience has increased the capability of involved companies to access proper financing for future energy savings.	
➢ Crucial factors and conditions: Limited costs of the initiative and easily replicable. The fuel saving was not only due to the training itself but a crucial factor was the increase of the drivers awareness that the company would have paid more attention to the fuel consumption and to the control of their performance.	

Project Title:	Design of a bulletin on Climate Change in the Small Island States of the South Pacific
Host country:	Western Samoa
Partner:	South Pacific Region Environmental Programme (SPREP)
Contact person:	Antonio Navarra Istituto Nazionale di Geofisica (ING) Tel. 0039 051 6398014 Fax 0039 051 6398132 E-mail: a.navarra@isao.bo.cnr.it
Project Purpose: • -Definition of a regional bulletin containing climate information for monitoring and forecasting; • -Training of personnel; • -Dissemination of information	
Executing Agency:	National Research Center (CNR) - Italy
Project period: 1 year	
Financial support:	Italian Ministry of the Environment - About 75,000 USD
➢ Main Targets: Design of a climate monthly bulletin containing information on climate-related variables	
➢ Methods and Procedures: Collection of observed data from participating Member States in the area; Collection of forecasting and simulations from international centers; Mapping and editing of the bulletin and merging with local data and interpretation	
➢ Experience: The project has been designed with the involvement of the stake-holders of the region interested. This process of collaboration has allowed a balanced project tailored on the needs of the participating countries, using the most advanced partners know-how.	
➢ Access to financing:	
➢ Crucial factors and conditions: The South Pacific is a particularly vulnerable area to climate change, but is also an area where the scientific results show interesting forecasting capability. Furthermore, the area is really crucial for the entire Earth climate variability. The area suffers from an insufficient number of trained (PhD and M.A. level) personnel. Training was an important factor of the project.	

Project Title:	Monitoring Unit for Environmental Projects (MUEP)
Host country:	China
Partner:	Italy
Contact person:	Mr. Romeo Orlandi, Italian Institute of Foreign Trade (ICE), Beijing
Project Purpose:	establishment of closer links between Chinese and Italian clean technologies enterprises and service companies and development of joint projects to increase the market potential for environmentally sound technologies and services in China, in line with the sustainable development objectives of the country
Executing Agency:	Italian Institute for Foreign Trade (ICE), Italian Confederation for Public Local Services (CISPEL) and Foreign Economic Co-operation Office of the China State Environmental Protection Agency (FECO/SEPA), Bejing
Project period:	June 1999 – March 2001
Financial support:	Approx. 200 Million Italian Lire for the first phase from the Italian Ministry of Foreign Trade and CISPEL, and approx. 1.8 Billion Italian Lire from the Italian Ministry of the Environment for increasing capacity building and the promotion of „Activities Implemented Jointly (AIJ) „ pilot projects

➢ Main Targets:

Creation of a Monitoring Unit for Environmental Protection in China (MUEP) as a research and consulting unit with the following main targets:

- Promotion and development of new and cost-effective environmental protection technologies, equipment and services in China;
- improvement of environmental standards and quality of living;
- support, with ad hoc funding from the Italian Ministry of the Environment, of capacity building activities for project identification and development within the pilot phase of „Activities Implemented Jointly" established by UNFCCC, particularly in the field of local energy production through renewable energies;

Methods and Procedures:

- Creation of local "Environmental Desks (ED)" in selected areas of China, in which Chinese and Italian experts will work together to implement the MUEP Project;
- Establish and maintain close contacts with suitable counterparts at provincial and municipal level (like local Environmental Bureaus, Design and Rsearch Institutions and local government officials)
- Training of Chinese Experts in Italy;
- Organise joint promotional activities , such as exibits , expert visits, seminars and workshops in China and Italy;
- Identification and preparation of a portfolio of promising projects and services to be developed for local energy production through renewable energy deriving from appropriate waste collection and management system, from biogas stemming from waste dumping and from the environmentally sound use and management of local woods and forests and agricultural production as well as solar and wind modules to be associated to these forms of energy production.

The MUEP operational modalities consist of:

- a co-ordination centre based in ICE Beijing Office
- a network of experienced Chinese professionals based in selected areas of China, linked to the centre through suitable information technology systems
- a co-ordination centre based in CISPEL Rome – Italy

➢ Access to financing:

Over and beyond the funding mentioned above, project activities are expected to generate additional funding, both from bilateral and multilateral sources.

- Crucial factors and conditions:
- High level of motivation and involvement of project partners at central and local level; continued policy level support; capability to develop and upgrade institutional capacity for sound environmental decision making, project development and implementation.

Project Title:	Climate Friendly Technologies Training Course for North Africa
Host country:	Italy
Partner:	Environment and Energy Institutions from Northern African Countries
Contact person:	Dr. Pietro Menna, ENEA's Energy Research Centre, Portici (Naples), Italy
Project Purpose:	Increase capacity building and information exchange on available sound environmental technologies to facilitate the implementation of UNFCCC and the Kyoto Protocol in the region.
Executing Agency:	Climate Technology Initiative (CTI) Task Force on Capacity Building and the Italian Agency for New Technology, Energy and the Environment
Project period:	
Financial support:	Approx. 70,000 USD from the Italian Ministry of the Environment plus in kind contribution from CTI partners

➢ Main Targets:

Present and discuss the state of the art of available climate friendly technologies appropriate for co-operation projects in North Africa;

Present and discuss methods and tools for assessing CO2 Emissions and Emission Reductions

Present and discuss lessons learned from field experiences in: renewable energy; energy efficiency in the transport and power generation sectors; rational use of energy in electricity end-uses; non energy sectors;

Increase „hands on" experience in understanding and consulting technology data bases;

Improve understanding of financial opportunities for climate friendly technologies in the region;

Improve linkages between North African and Italian and other CTI institutions.

➢ Methods and Procedures:

Lectures from public and private institutions and companies;

Presentation and discussion of case studies from North African Countries

Computer aided sessions;

Preparation of a CD Rome for course participants

➢ Experience:

So far, requests for participation have been numerous and consideration might be given to follow-up training initiatives in the region

➢ Access to financing:

See above

➢ Crucial factors and conditions:

Motivation and involvement of trainees and trainers.

Project Title: Climate Changes and extreme events: prediction and adaptation measures Italy and Countries of the South Pacific
Host country: Italy and Countries of the South Pacific
Partner: Italy; South Pacific Region Environmental Programme (SPREP)
Contact person: Antonio Navarra Istituto Nazionale di Geofisica (ING) Tel. 0039 051 6398014 Fax 0039 051 6398132 E-mail: a.navarra@isao.bo.cnr.it Penehuro Lefale (SPREP)
Project Purpose: – Assessment of statistics of Climate changes on extreme events in the South Pacific; – Assessment of a system for short term climate forecasting tailored for the area
Executing Agency: Italian Ministry of the Environment; ING; SPREP
Project period: 2 years
Financial support: To be found
➢ Main Targets: - Assessment of intensity, frequencies and characteristics of extreme events in the South Pacific in the presence of climate changes; - Assessment of a short-term climate forecasting system for the area (6-9 month) with local evaluation of predictions; - Development of adaptation strategies
➢ Methods and Procedures: 1. simulation of high resolution, wih general circulating models, using nested models, of the South Pacific and assessment of extreme events (i.e. tropical storms and tropical cyclones); 2. Evalutation of 6-9 month forecasts in collaboration with local scientists 3. Training of local scientistis to the interpretation of short-term climate forecasts.
➢ Experience: Italy has a long experience in modeling and forecasting; SREP will coordinate the local net-service and scientists.
➢ Access to financing: To be found.
➢ Crucial factors and conditions: 1. The definition of the project on the basis of the outcome of the UN workshop to be held in July 2000. 2. Training in Italy of personnel by italian experts is also an important factor.

NETHERLANDS:

Project title:	Netherlands Climate Change Studies Assistance Program
Partner:	Under the program activities are undertaken to support 17 countries. In each country there is a national focal point coordinator. This person is usually attached to the Environment Ministry or the Meteorological Service.
Host country:	17 countries: Surinam, Bolivia, Ecuador, Costa Rica, Ghana, Yemen, Senegal, Mongolia, Kazakhstan, Bhutan, Mali, Zimbabwe, Colombia, Bangla Desh, Egypt, Nicaragua, Vietnam.
Contact person:	Mr. Jan Feenstra, email: jan.feenstra@ivm.vu.nl
Project Purpose:	To enable developing countries to implement commitments under the UNFCCC.
Executing Agency: Institute for Environmental Studies (IVM), Amsterdam, the Netherlands.	
Project Period:	July 1996 - December 2000
Financial support: NLG 11,600,000	
Main objectives: To enable developing countries to create a greater awareness of climate change issues and to increase the involvement of policy makers, scientists and the general public. The studies focus on GHG emission inventories, mitigation studies, assessment of climate change impacts and adaptation options and the compilation of National Communications.	
Methods and Procedures: The program supports the responsible ministry, usually the Ministry of Environment, to initiate climate change studies, which are carried out by appropriate scientific institutions.	
Experience: positive: use of local consultants contributes to on-the-job capacity building; negative: dependence on foreign funding makes institutional continuity difficult.	
How does the project support access to financing for capacity building? By involving local experts in implementing studies.	
Crucial factors and conditions: Commitment of counterpart organisation. Good donor coordination, in particular with GEF/UNDP.	

Project title:	Workshops North-South Dialogue for Implementing the UNFCCC
Partner:	Bangla Desh Centre for Advanced Studies (BCAS) with other NGOs from Senegal and Brasil.
Host country:	Bangla Desh
Contact person:	Dr. A. Atiq Rahman, email: atiq@pradeshta.net
Project Purpose:	To enable NGOs from developing countries to participate in discussions on technological choices and sustainable development, in the framework of UNCED and UNFCCC implementation
Executing Agency: BCAS (see above),	
Project Period:	July 1997 - December 1997.
Financial support: NLG 181,474	
Main objectives: To stimulate developing countries to participate in climate change discussions, in particular on application of climate-friendly new technologies.	
Methods and Procedures: Organization of three workshops	
Experience: Positive; this way of capacity building through NGOs helps to strengthen commitment to consider policies that reduce the risk of global environmental damage.	
How does the project support acces to financing for capacity building? The activity itself contributes to cap. building; furthermore networking is established.	
Crucial factors and conditions: Active NGO representatives; an open relationship between NGOs and government.	

Project title: Asian Alternative Energy Unit (ASTAE)
Partner: World Bank
Host country: Several Asian countries through the World Bank
Contact person: ---
Project Purpose: To implement alternative energy elements in regular World Bank loans for the Asian region.
Executing Agency: World Bank
Project Period: 1993 – 2000
Financial support: US$ 6,800,000
Main objectives: - to fulfill the energy demand of small-scale users in a sustainable way; - to stimulate the use of renewable energy technologies and energy efficiency to preserve or restore the environment; - to 'green' the disbursement portfolio of the World Bank.
Methods and Procedures: Direct operational support to identify and help prepare alternative energy components for inclusion in World Bank funded projects.
Experience: The application of renewable energy technology by users of WB loans has increased significantly.
How does the project support acces to financing for capacity building? The program provides training for World Bank and developing country staff to increase familiarity with energy efficiency and renewable energy options.
Crucial factors and conditions: Availability of extra funds to identify alternative, but viable options.

Project title:	Inti K'anchay (Sun Light)
Partner:	ENERGETICA (an NGO)
Host country:	Bolivia
Contact person: --	
Project Purpose: To sustainably improve the rural people living conditions and to create a market for solar home systems in Cochabamba province	
Executing Agency: ENERGETICA	
Project Period: November 1996 - November 1998	
Financial support: NLG 548,000	
Main objectives: To introduce and to evaluate a PV market strategy in the valleys of the Carrasco and Tiraque provinces of Cochabamba	
Methods and Procedures: The project will introduce the marketing of household PV systems, giving attention to technical, economic, social, environmental and institutional aspects.	
Experience: Positive.	
How does the project support acces to financing for capacity building? The project activities include training of (organized) end-users, credit agencies and PV system suppliers.	
Crucial factors and conditions: Technical and economic viability of household PV systems.	

Project title:	Capacity building in management of national meteorological and Hydrological Services
Partner:	World Meteorological Organization (WMO)
Host country:	World wide
Contact person: --	
Project Purpose:	To enable developing countries to participate in research in the area of climate change
Executing Agency:	WMO
Project Period:	October 1996 - March 1999
Financial support:	NLG 795,000
Main objectives:	To strengthen the capacity of meteorological and hydrological services in developing countries
Methods and Procedures: Provide training.	
Experience: Positive.	
How does the project support acces to financing for capacity building? The activity contributes directly to capacity building	
Crucial factors and conditions: good selection of candidates for training sessions.	

PORTUGAL:

Project Title:	FE/UEM Capacity Building – Inter-University Twinning Arrangement For Faculty Engineering
Host country:	Mozambique
Partner:	IST – Instituto Superior Técnico UA – Universidade Aberta LNEC – Laboratório Nacional de Engenharia Civil TAGUSPARK – Parque de Ciência e Tecnologia CPIN – Centro Promotor de Inovação e Negócios JUNITEC – Junior Empresa do Instituto Superior Técnico
Contact person:	Prof. João Hipólito, IST
Project Purpose:	To improve higher education and vocational training capacity at the University of Mozambique, enabling to educate technicians in fields related to technologies for sustainable development
Executing Agency:	Instituto Superior Técnico
Project period:	Feb 1999 to June 2000
Financial support:	1,800,000 USD from Governmental of Portugal and International Development Agency (IDA)
➢ Main Targets:	
Strengthening institutional capacity of teaching in higher education and training, concerning areas in engineering, energy and environment, energy technology, biotechnology, and advanced technologies of production.	
➢ Methods and Procedures:	
Strengthening the teaching capacity. Restructuring the existing courses and creating new courses in areas related to energy and environment. Creating Centres for technology transfer and adaptation.	
➢ Experience:	
The project's activities have been implemented for 1 year, without problems. The objectives have been achieved and the results obtained so far indicate a successful action.	
➢ Access to financing:	
The project activities create opportunities to continue for futures co-operation actions and will identify other financial sources.	
➢ Crucial factors and conditions:	
The project activities will create synergies for the association of Portuguese and Former Portuguese Countries Universities, and the establishment of networks for teaching and training in the PALOPs (African Portuguese Speaking Countries).	

Project Title:	Assistance to Energy Policy Implementation in Cape Verde
Host country:	Cape Verde
Partner:	IST – Instituto Superior Técnico of Portugal DSE – Directorate for Energy Services PARTEX – Consultoria em Engenharia SA of Portugal
Contact person:	Prof. Maria da Graça Carvalho, IST Ing. Jorge Borrego, PARTEX
Project purpose:	The project aims at providing cape verdean political authorities with the institutional support and assistance necessary for the restructuring and development of the energy sector in the framework of changing, market oriented economics conditions, which also ensures the optimal use of national and international development finds allocated to the energy sector.
Executing Agency:	Instituto Superior Técnico
Project period:	July 1998 to September 2000
Financial support:	EU – Synergy Programme DGE – Directorate General for Energy of Portugal CEDINTEC – Centre for Technological Development and Innovation of Portugal Total financing: 180.000 Euros
Main targets:	- To ensure the technical capability of the energy sector institutions; - To foster dialogue between decision makers from the economical and political sectors on energy and also environmental related issues; - To promote a coherent regional strategy for the archipelago (legislation and financial resources, both national and international); - To make recommendations for the development of the electric and oil sectors; - To identify co-operation possibilities and priorities in the area; - To increase the ability to implement end use energy efficiency; and, - To enlarge the renewable sources contribution for energy production and consumption.
Methods and Procedures:	The project implementation was divided in the following phases: - Activity 1: Technical support activities. - Activity 2: Energy policy advice. - Activity 3: Staff training. - Activity 4: Energy studies. - Activity 5: Energy statistics ad planning. - Activity 6: Public awareness consumer's education. - Activity 7: Technical development. - Activity 8: Management, monitoring and follow-up of the results.
➢ Experience:	The project is contributing for the reinforcement of institutional capability for the development of a national energy policy, to improve energy sector performance, to increase the use of renewable energies, and awareness on environmental considerations and impacts.
➢ Access to Financing:	The project is financed by Portuguese and EU funds, creating the possibilities for the access of new national and international funds for future co-operation actions in capacity building with impact on Climate Change matters.
➢ Crucial factors and conditions:	The potential for replication and dissemination of this action is considerable; considering the similarity of existing energy policy conditions, the conclusions obtained in this action could be replicated in neighbouring African countries.

Project Title:	Assistance to Energy Policy Implementation in Mozambique
Host country:	Mozambique
Partner:	IST – Instituto Superior Técnico UEM – University Eduardo Mondlane of Mozambique NTUA – National Technical University of Athens SOMAGUE - Portugal PARTEX – Consultoria em Engenharia SA
Contact person:	Prof. Maria da Graça Carvalho, IST
Project Purpose:	Structuring Energy Sector of Mozambique to respond to the needs of sustainable development and environmental protection
Executing Agency:	Instituto Superior Técnico
Project period:	July 1998 to September 2000
Financial support:	EU – Synergy Programme DGE – Directorate General for Energy of Portugal CEDINTEC – Centre for Technological Development and Innovation of Portugal Total financing: 200,000 euros

➢ Main Targets:

The main objectives are to provide institutional support and assistance to the political authorities and to main energy consumers aiming at restructuring and developing the energy sector. International co-operation, together with technical programmes implemented by EC and other international financial International institutions, will assist in strengthening the energy sector, building capacity for a continuous dialogue, thus preparing the basis for developing institutional and legal frameworks adjusted to the market economies and allowing further progress in the energy sector efficiency.

➢ Methods and Procedures:

The objectives are accomplished in two levels: on one hand, improving competitiveness for European enterprises who want to establish linhs in Mozambique and also by contributing to environmental protection by means of increasing rational energy use and better usage of renewable resources. On the other hand, specifically in the African region the action intends to accomplish the implementation of a national energy policy in Mozambique contributing to sustainable development, as well as to contribute to the reinforcement of local and inter-regional (SADC) structures for co-operation in energy and environment actions.

➢ Experience:

The project is contributing for the reinforcement of institutional capability for the development of a national energy policy, to improve energy sector performance, to increase the use of renewable energies, and awareness on environmental considerations and impacts.

➢ Access to financing:

The project is financed by Portuguese and EU funds, creating the possibilities for the access of new national and international funds for future co-operation actions in capacity building with impact on Climate Change matters.

➢ Crucial factors and conditions:

The potential for replication and dissemination of this action is considerable; considering the similarity of existing energy policy conditions, the conclusions obtained in this action could be replicated in neighbouring African countries such as Zambia, Namibia, Zimbabwe, Tanzania and Angola. The possibility for the creation of joint trans-national energy policies is open, as well as it works as a guarantee to foreign (namely European) investment opportunities.

Project title: Utilization of weather forecasts and climatic modelling to support the sustainabledevelopment ia the PLOP and Macao Territory.
Countries involved: Angola, Cabo Verde, Guiné Bissau, Moçambique, Macau, Portugal, S. Tomé e Príncipe.
Executing Agency: Agência dos Países de Lingua Oficial Portuguesa Para a Área do Clima e das Respectivas Implicações Ambientais - Agência CRIA
Project period and costs: Out 1999 - 2002
Total cost 6.999.131 USD
1 - Brief description of the Project Most of Portuguese speaking countries in Africa are still operating a number of Meteorological activities, such as weather and climatological services in the same manner as during the pre-independence days, when the main users of the services were the civil aviation and government itself. However, since then rapid social-economic development has taken place, new requirements from different sectors are needed, and Meteorological Services are unable to respond in a suitable manner. The present project intends to promote a better utilisation of weather forecasts for the support of social and economical activities. The major objective of the project is to create conditions for improving the weather prediction quality in long and medium term in all Portuguese Speaking African Countries (PALOPs) and in Macao using numerical models and implementing an operational scheme of regional climate simulation, without resorting of high-speed computers. A Regional Atmospheric Modelling System (RAMS) will be used as a numerical limited area model, as well as global models of large scale. The final result of this project will be the implementation of RAMS, in operational mode, to be used in the weather prediction and climate characterisation, at present and in future, in all Countries/Territories. For the weather prediction, RAMS will be forced by initial and boundary conditions obtained from ECMWF, as well as by radiosonde and surface observations taking place in those Countries/Territories and/also in neighbouring countries. In studying the climate, future scenarios of large scale produced by the Melbourne University General Circulation Model will be used to force RAMS. The project will be implemented in two phases and will take three years and an half (42 months) 2 - Special aspects of the Technology In the present Project a Limited Area Model will be calibrated and validated for each synoptic region of the PALOPs and Macao Territory. An experimental phase will be installed in Lisbon, and two persons for each country will be trained. At the end of the first year the project will be implemented in all countries under the responsibility of the person trained in Lisbon during the experimental phase. The transference of technology in the area of numerical weather models is the major objective to reach for promoting a better utilisation of weather forecasts in the support of social and economic activities.
Relevance of the project:
The technology of limited area models are been used all over the world with the objective of obtaining the improvement of regional weather forecasts for supporting different social and economical activities.The modelling technology is an important aspect to be developed and to be improved in order to obtain a better understanding of the climatic system and to have long-term forecasts in a seasonal perspective.

Project Title: WaveModels for the PLOPS.

Country, Region:

The project will involve Portugal and the Portuguese speaking countries in Africa - Angola, Cabo Verde, Guiné Bissau, Moçambique, São Tomé e Príncipe - and the territory of Macau in Asia.

Contact Person:

Sergio Ferreira

Address:

Instituto de Meteorologia, Rua C ao Aeroporto

1700 LISBOA

PORTUGAL

Execution Agency:

CRIA - Clima e Respectivas Implicações Ambientais

Donor country: Portugal

Financial and technical co-operation

Project Period and Costs

The expected period of duration for the Project is 4 years.

The expected total costs are 80 000 000$00.

The Project can also be implemented by phases with the execution in different countries differed in time.

Project Main Targets

The Project will develop and improve the capabilities of the Portuguese speaking countries in Africa and of Macau (PLOP) to provide meteorological support to the activities related with the sea, trough the use of numerical models for wave forecast, wave hindcast and wave climatology.

Waves have a large influence in the safety and efficiency of most activities at sea. In many cases there are large budgets involved in these activities and their relative weight in the country economy is considerable. So, this is one of the fields where the economic impact of meteorology can be much significant.

Instruments Methods and Procedures

The project will have two main components:

- Implementation of regional versions of a third generation sea wave numerical model;
- Courses on sea waves, training on the use of the wave models and on the interpretation of their results.

The project will have two phases.

The first phase will be held in Portugal and will involve the training of the national teams that will became, the national responsible for the wave models operation and maintenance. This phase will include:

- Development of the adequate regional version of the wave model;
- Courses in sea waves and sea wave models;
- Training in the use of wave models.

The second phase will take place in the different PLOP and will include the training of other meteorological personal that will use the results of the wave model. This phase will include:

- Operational implementation of the regional wave model;
- Courses in sea waves, their influence in the human activities at sea and in the use of wave models to provide the relevant information for the users.

Previous Experience, Success Factors and Other Information

The Portuguese experience in the development and use of sea wave models began in 1986 with the development and implementation of a first generation wave model named MAR211. The present third generation wave model MAR3G, was developed in 1992 and was implemented as an operational model for wave forecast in 1994. The present version of this third generation model can be run in microcomputers, and so, it can be easily implemented in developing countries.

The Portuguese experience has shown that wave models can improve dramatically the capability of providing reliable wave forecasts and that these forecasts can be used by shipping, fisheries, coastal and harbour operations, offshore activities, etc. The experience at the Portuguese Meteorological Institute has shown that the model wave forecast can be easily sold and became profitable to the Meteorological Institute.

The model results have also proven useful in wave hindcast cases and in wave climatology. This is even more important in the cases where wave data obtained form wave meters is lacking.

The success of the project depends mainly of eventual problems related to the political conditions in some of the PLOPS.

Wave models have been in use for several decades in many countries. In most cases these models were obtained by projects of transfer of technology. One of the components of the present project that can contribute to a successful achievement is the component of education and training.

SWEDEN:

Project title:	Forestry Industry Sector Programme in Bolivia
Host region:	Bolivia, South America
Partner:	Cámara Forestal de Bolivia
Contact person:	Mr. Arturo Bowles Olhagaray / Managing Director
Executing agency:	Cámara Forestal de Bolivia / Swedish Partner: SCC Natura
Project period and costs: 1996-09-200112 – SEK 23.100.000	

Requested specific information:

- What are the project's main targets?
  Contribute to the development of the forest industry sector in Bolivia based on a sustainable management and logging of the forest including the export promotion of certified wood.

- Which instruments, methods and procedures are applied by the project in order to respond to the concrete needs of users and beneficiaries on capacity building?
- By way of technical assistance: Swedish long term experts in forestry, industrial forestry and market/promotion, and also short term Swedish experts. Some equipments are also provided.
  The project is being implemented by the way of technical assistance to four model companies, but also to all members of the Chambre, such as practical analysis of technical problems in the industry, analyse forms for co-operation, prepare material for promotion, develop methods for the introduction of green certificate in marketing.
- Installation of the Geographic Information System at the technical department of the Chambre, Promabosque. This entity is also given technical assistance which is being then being diffused to the members.
  Training and seminars form part of the capacity building of the project.

- Which positive experience has been gained up to now (lessons learned / best practices) and how is it diffused / applied in other projects?

The technical department, PROMABOSQUE, has provided support, to the forestry companies to conduct Strategic Forestry Plans for the managing of the forestry concessions in order to comply with the Forestry Law. The Swedish support in this area has been of vital importance for the companies achieving these plans. Bolivia has today 86 concessions.

The technical assistance in the industry has contributed to the development and implementation of system involving management control considering aspects such as quality, cost efficiency and environmental aspects.

By providing support in conducting market studies and strategies for the introduction of new wood species, designing information material about new wood species, and also in designing a website, the market promotion has been reinforced.

- How does the project support access to financing for capacity building?
-

- With respect to capacity building, which factors and conditions are crucial to the success of the project? The companies' behaviour i.e. transparency and not mistrust

- Do you know of other, similar projects? Please indicate.

Yes, in the way the project is designed regarding methods and procures of diffusion of know-how. The Industrial Environmental Project in Bolivia is designed in a similar way i.e. the Bolivian counterpart is the Chamber of Industry in Bolivia and it is through this Chamber Swedish technical assistance is being provided to the companies: seminars,

workshop, and also practical training at the industry cites. The companies need to upgrade their sites in order to comply with the environmental regulations etc, and although the project, through the Chamber, provides these companies with support in achieving this, it takes time for the companies to understand the benefits of letting in people at their sites. Fortunately the people are not unknown but form part of the Chamber that the companies belong to. Once seeing the strong link between environmental aspects and economic benefits (i.e. installing a new equipment the water consumption will be reduced), the companies become interested and are open to co-operate.

➢ Other ideas/information:

Working with the private sector for the achievement of improved sustainable use of natural resources in all aspects is of vital importance. The regulatory framework is also important but without actions being taken by the polluters/users of natural resources no change will be made. Therefore I do believe in increasing the Swedish support contributing directly to the change/ behaviour of the industry, but of course through organisations, Chambre of Industry o similar organisations, in order to minimize distortion in the market.

Project title:	TIEMPO
Host region:	Global
Partner:	University of East Anglia (UEA)
Contact person:	Mick Kelly
Executing agency:	Stockholm Environment Institute (SEI)
Project period and costs: 1991 ---- (ca SEK 500 000 yearly)	

Requested specific information:

- What are the project's main targets?

„... to be effective, the flow of information (on climate change) must be in both directions. It is self-evident that the developing world must have access to timely and relevant information but it is equally important that the industrialised nations be fully aware of the particular knowledge, aspirations and perspectives of the South."

- Which instruments, methods and procedures are applied by the project in order to respond to the concrete needs of users and beneficiaries on capacity building?

- TIEMPO quarterly Bulletin
- TIEMPO Climate Cyberlibrary

- Which positive experience has been gained up to now (lessons learned / best practices) and how is it diffused / applied in other projects?

- The project continues to contribute to meeting the obligations Parties to the UN Framework Convention on Climate Change enter into.....

- How does the project support access to financing for capacity building?

- ...specifically those commitments under Article 4 regarding support for developing country measures and Article 6 concerning education, training and public awareness

- With respect to capacity building, which factors and conditions are crucial to the success of the project?

- —

- Do you know of other, similar projects? Please indicate.

No

- Other ideas/information:

None

Project title:	Energy programme Zambia
Host region:	Zambia
Partners:	Energy Regulation Board, and ZESCO (nat electricity company) Escos
Contact person:	Anne-Charlotte Malm, Sida
Executing agencies: SWECO, SwedPower, SEI	
Project period and costs: 2-5 years, depending on activity	Total budget: 6 MEuro

Requested specific information:

➢ What are the project's main targets? ➢ Institutional building of Energy Regulation Board. Consultancy from corresponding Sw institution to discuss the roles and responsibilities of a regulator in a liberalised energy market. ➢ Institutional building ZESCO Improved efficiency. Support to Environmental and Social Affairs Unit, nvironmental Management System. ➢ Rural and Peri-urban Electrification. PV-systems. Enabling a market for ESCOs. Innovative financing schemes and pricing principles. ➢ Rehabilitation of Kafue Gorge, major Hydropower plant. ➢ Institutional CB Regional training Centre for operations of Hydropower plants.
➢ Which instruments, methods and procedures are applied by the project in order to respond to the concrete needs of users and beneficiaries on capacity building? ➢ Affordable electricity supply for the low-income majority ➢ Improved influence in energy planning and systems design for the affected groups. ➢ Twinning with corresponding Sw institutions ➢ CB for functioning energy actors in a liberalised market ➢ Establishing private ESCOs
➢ Which positive experience has been gained up to now (lessons learned / best practices) and how is it diffused / applied in other projects? ➢ Reflects well the overall policy for Sidas energy sector approach: assistance to a sustainable use of energy ➢ Env/social unit has become a valuable resource in the energy systems planning and design
➢ How does the project support access to financing for capacity building? ➢ Integrated in all activities ➢ Higher degree of self finance for the energy market organisations
➢ With respect to capacity building, which factors and conditions are crucial to the success of the project? ➢ Participatory approach. Counterpart collaboration in project design. ➢ Sustainable enterprises
➢ Do you know of other, similar projects? Please indicate. ➢ World Bank Rural Energy initiatives ➢ Other Sida energy sector support
➢ Other ideas/information:

Project title:	World Commission on Dams
Host region:	global
Partner:	The commission itself
Contact person:	Secr general Achim Steiner
Executing agency:	
Project period and costs:	June 1998-Dec 2000 Total budget: 10 MUSD . 1 MUSD from Sida funding.

Requested specific information:

➢ What are the project's main targets? ➢ To review the development effectiveness of dams and assess alternatives for water resources and energy development ➢ To develop internationally acceptable criteria and guidelines to advise future decision-making in theplanning, design, construction, monitoring, operation and decommissioning of dams
➢ Which instruments, methods and procedures are applied by the project in order to respond to the concrete needs of users and beneficiaries on capacity building? ➢ Thematic reviews, cross-check surveys, regional consultations and case studies ➢ Work is performed with multidisciplinary teams, composed from different companies, part of the world etc ➢ Open access to information, draft reports for comments, open contribution of ideas, background material etc. ➢ Web page with open access ➢ Outreach activities Inclusiveness and participation at all levels and stages of the work programme
➢ Which positive experience has been gained up to now (lessons learned / best practices) and how is it diffused / applied in other projects? ➢ 32 research and consultancy activities initiated over the globe, including the 55-member WCD Forum ➢ 17 thematic reviews involving 70 lead and support writers and over 200 reviewers ➢ 150 dams in more than 40 countries in a cross-check survey. Case studies in ten countries ➢ Four regional consultations: South Asia, Latin America, Africa/Middle East,East/South east Asia. Multi-stakeholder panellists, 100-150 observers incl. media invited to each consultation. ➢ During first year more than 50 000 mails received, 30 000 visitors to the web-site
➢ How does the project support access to financing for capacity building? ➢ Forum members: inter alia Multilateral Agencies, Bilateral agencies, Export Credit Guarantee Agencies and Government Agencies ➢ The task of the Forum is to provide the Commission with the means to disseminate its findings
➢ With respect to capacity building, which factors and conditions are crucial to the success of the project? ➢ Broad participation and influence in the process are the key-words
➢ Do you know of other, similar projects? Please indicate.
➢ Other ideas/information:

UNITED KINGDOM:

Project Title:	End Use Energy Efficiency
Host country:	Indonesia
Partner:	Department for International Development
Contact person:	Mrs Emy Perdanahari, Directorate General of Electricity and Energy Development, Ministry of Mines & Energy
Project Purpose:	To stimulate sustainable improvements in end-use energy efficiency in Indonesia, producing environmental, resource conservation, business competitiveness and economic growth benefits.
Executing Agency:	ETSU
Project period:	Nov 1996 – Jan 2001
Financial support:	£1.2m

➢ Main Objectives:

- development of the necessary policies and skills to establish sustainable energy-saving activities
- evidence of growing awareness of the benefits of energy efficiency, and the necessary skills in government to effectively promote these benefits
- involvement of trade associations in activities resulting in energy savings of 10% amongst operators in target sectors: hotels and bus & taxi fleets
- develop local skills for translating techno-economic measures into practicable actions to save energy.

➢ Methods and Procedures: Working alongside government staff to systematically develop a programme that addressed realistic opportunities for energy savings. The Project included demonstration projects, workshops/seminars, a study tour, training and development of a model to be used as a tool to evaluate options for government support for energy efficiency measures.

➢ Experience: Political and commercial uncertainties diverted attention from normal business decision-making processes to crisis management. Although this strengthened the case for the financial benefits of saving energy, senior managers were distracted by political developments and survival measures for their organisations. Similarly, the near-collapse of the state electricity supplier shifted priorities at DGEED to restructuring of the power sector, marginalising energy efficiency as a policy.

➢ Access to financing: Indonesian Government budget for EE reduced due to economic crisis, resulting in limited funding for complementary activities. However, DFID budget was sufficient for a programme of effective promotional activities, aimed at target sectors.
Support from other donor agencies was largely diverted to welfare and other social needs, reducing opportunities for securing finance to supplement/extend DFID initiative.

➢ Crucial factors and conditions: Securing the co-operation and support of staff who are genuinely interested in the successful outcome of the Project. Director-level support is necessary to ensure that the Project retains the interest of the Government. To achieve effective access to end users, it is necessary to gain the trust of senior officials in trade associations who can demonstrate a genuine involvement in promoting the interests of their industry.
Political and commercial stability is a major factor in establishing medium- and long-term relationships with key players who can be relied upon to support the Project's aims.

Project title:	Financing Rural Energy in South Africa (FRESA) Workshop
Host region:	South Africa
Partner:	Department for International Development
Contact person:	Dr Garry Staunton, AEA Technology (UK), Mr Chris Hazard Eskom (South Africa)
Executing agency:	AEA Technology & Eskom
Project period and costs:	January – December 2000

Requested specific information:

➢ What are the project's main objectives?

An important objective for the new democratic government in South Africa has been to expand access to electricity. A target of 2.5m new household connections by the end of 1999 has been exceeded, by an electrification programme funded entirely within the industry. However, while urban areas are electrified to levels as high as 80-90%, impoverished rural areas are still well below 40%.

The South African DME have recently developed the Rural Non-Grid Launching Programme. Under this programme, private sector consortia will be allocated a rural area in which they will install and maintain systems, selling the electricity service against an appropriate fee. An important element programme is the provision of external finance to the consortia – the Financing Rural Energy in South Africa (FRESA) workshop will have an important role in building capacity to provide this.

➢ Which instruments, methods and procedures are applied by the project in order to respond to the concrete needs of users and beneficiaries on capacity building?

The aim of the FRESA workshop is to bring together representatives of the selected consortia with senior representatives from UK and international companies able to provide appropriate and practical financing arrangements.

Senior representatives from all consortia selected under the Rural Non-Grid Launching Programme will be invited to attend and present their business cases. The event agenda will give opportunities for consortia representatives and investors to meet. Potential investors attending will include major banks, specialist environment or development investors (such as the Commonwealth Development Corporation, Impax Capital etc.), and bilateral and multilateral donors (including the UK Department for International Development, the European Commission, European Investment Bank, World Bank, United Nations Development Programme, and the Global Environment Facility).

➢ Which positive experience has been gained up to now (lessons learned / best practices) and how is it diffused / applied in other projects?

Participation by the full range of stakeholders is essential (representatives of government, commercial and industrial organisations) and is needs to be in a forum that allows them to express and build upon their individual needs.

We have established a Steering Group that has the specific remit to monitor progress and to develop and promote the FRESA workshop. This group includes senior representatives from the South African DME, Development Bank of Southern Africa, ESKOM and AEA Technology Environment. The committee is chaired by DME and key players in the Rural Non-Grid Launching Programme are very supportive of the FRESA workshop. The committee, first established in 1998, meets regularly.

➢ How does the project support access to financing for capacity building?

The primary aim of the event is to help attract financial support for the DME process, and the associated growth in the rural energy markets (and hence capturing the associated benefits). It will support this by allowing potential investors to

meet (on a one-to-one basis) senior representatives from government and industry who are the key players in rural energy provision in South Africa.

There will also be opportunities for companies to provide rural energy related technology and commercial skills.

➢ With respect to capacity building, which factors and conditions are crucial to the success of the project?

The project will need to ensure links between potential investors and individual consortia are sufficiently strong to ensure real funding for the new arrangements.

➢ Do you know of other, similar projects? Please indicate.

The idea of finance based investment fora and round tables is well established. However, as far as we are aware the idea of targeting this at a decentralised rural electrification which is intended to deliver low environmental impact energy solutions is new.

➢ Other ideas/information:

The event is receiving external support from the European Commission and the UK Foreign and Commonwealth Office Climate Change Challenge Fund. It has received Climate Change Challenge Fund support as it is seen as contributing to the stated objectives of the FCO Climate Change Challenge Fund. These are: to help developing countries achieve economic growth with lower emissions of greenhouse gases; to help UK business take advantage of opportunities created as developing countries move to climate-friendly growth; and in doing so raise the profile of the UK as a leader in the areas related to climate change.

Contributions will also be made by the South African stakeholders covering the cost of their participation in work of the Steering Group and by supporting their delegates to the FRESA event.

Project title:	Integrating Renewables into Energy Systems (IRES)
Host region:	Asia & Africa
Partner:	DFID
Contact person:	Dr Garry Staunton, AEA Technology Environment (ETSU)
Executing agency:	AEA Technology Environment (ETSU)
Project period and costs:	May 1996 – March 1999, £253,000

Requested specific information:

➢ What are the project's main objectives?

The project set out to analyse renewable energy schemes around the world with the intention of extracting insights into the application of best practice for overcoming market, technical and financial barriers to the establishment of the sustainable markets required for the large-scale deployment of renewable energy technologies. These insights were then communicated to renewable energy developers and policy makers via a series of participative workshops.

➢ Which instruments, methods and procedures are applied by the project in order to respond to the concrete needs of users and beneficiaries on capacity building?

The project proceeded by carrying out interviews of a range of actors in renewable energy projects and programmes in China, India, Indonesia, Kenya, South Africa, Thailand and Zimbabwe. The results of these interactions were systematically analysed and the needs of users beneficiaries and other actors extracted. The findings of this analysis were fed back to selected actors via the workshop sessions.

➢ Which positive experience has been gained up to now (lessons learned / best practices) and how is it diffused / applied in other projects?

The project was structured around seeking best practice so as to be able to provide practical guidance for renewable energy developers and policy makers. In essence the project clearly showed the need to select and target interventions according to the context. It then went on to extract lessons that can form the basis of future guidance on the development of an implementation of cost-effective market mechanisms suitable for promoting renewable energy in developing countries

➢ How does the project support access to financing for capacity building?

One of the specific themes covered by the project was that of financing and associated capacity building. In particular the work analysed novel financing models that have the ability to help build local capacity.

➢ With respect to capacity building, which factors and conditions are crucial to the success of the project?

The study shows that no single approach to capacity building can be guaranteed to provide universal benefits. However, a combination of carefully thought through, and controlled, interventions can be used to give maximum market stimulation for minimum distortion, over a defined time-frame. In practice this implies the need to select and target interventions according to the exact context under investigation.

➢ Do you know of other, similar projects? Please indicate.

We are aware that the underlying concepts have also been analysed by the World Bank, who utilises a similar approach under the banner of "smart subsidies".

➢ Other ideas/information:

Participative workshops aimed at informing appropriate decision makers of the findings of the study, and sensitising them to how the underlying principles could help them in their activities, were held in Cape Town, Nairobi, New Delhi, Johannesburg and Shanghai.

Project Title:	Oxfam Disaster PREPAREDNESS AND management programme PHASE II
Host country:	Bangladesh
Partner:	DFID Bangladesh
Contact person:	Dilruba Haider
Project Purpose:	The purpose of the project is to strengthen the capacity of poor men and women in vulnerable communities to cope with disasters.
Executing Agency:	Oxfam-Bangladesh
Project period:	October 1999 - September 2002
Financial support:	£235,599

➢ Main objectives:

The main objective of the project is to enhance understanding and capacity for appropriate community level disaster preparedness and management in NGO and government programmes.

➢ Methods and Procedures:

The project proposes to:

- enhance response capacity by establishing 20 new emergency stores and rosters of trained volunteers;
- build capacity by training 360 people in disaster preparedness and response;
- reduce vulnerability by building another flood shelter, providing 5 more community rescue boats, 3 flood-proof food/grain/fodder stores and 3 bamboo nurseries;
- produce printed training materials on flood shelter management, urban building issues and waterlogging;
- produce a video on flood shelter management for broadcast on national television;
- organise national seminars and workshops on disaster issues.

➢ Experience:

Oxfam's approach is to integrate disaster preparedness into the development activities of its local NGO partners, and it also lobbies on disaster issues at national level and supports the Disaster Forum, a co-ordinating body for NGOs and government.

Oxfam-Bangladesh will implement the community-based parts of the project through 10-15 partner NGOs in selected riverine and coastal communities.

Oxfam has close links with the Disaster Management Bureau of the Ministry for Disaster Relief and Rehabilitation. Government forest, livestock and fish research institutes will be involved in training delivery.

➢ Crucial factors and conditions:

The support of key stakeholders is critical to success.

Sustainability of the community-based activities is encouraged by promoting local ownership of structures, and through encouraging indigenous disaster mitigation measures, that may have lapsed in the past.

It is important to promote women's active participation in local committees.

EUROPEAN COMMISSION:

Project Title:	Start-Up CDM in ACP Countries (SUCAC)
Host country:	Senegal, Uganda, Zambia
Partner:	University of Zambia (Centre for Energy, Environment & Engineering in Zambia/CEEEZ), ENDA Third World (Senegal), Dept of Meteorology, Ministry of Natural Resources, Uganda
Contact person:	
Project Purpose:	To identify, develop and promote pilot CDM projects to 'kick-start' CDM & create new development paradigm for technology transfer, finance, clean economic growth that meet national objectives, with verifiable environmental, energy & developmental baselines. Put in place national focal point secretariats to co-ordinate various national stakeholders, identify & address key institutional, training & public awareness needs, develop macro-baseline information & mechanism (including MESAP/RES) for identifying projects & setting their baselines, developing clearinghouse through secretariats to verify, validate & certify investments from GHG environmental & developmental/equity points of view, to attract international investors & donor support to expand CDM as means
Executing Agency:	Institute for Energy Economics and the Rational Use of Energy, University of Stuttgart, Pfaffenwaldring 31, 70550 Stuttgart, Germany
Project period:	2000 - 2002, 24 months
Financial support:	EURO 952,338 (= 79.3 % of total project cost)
Main objectives:	Project investments in key sectors developed through operational national secretariats co-ordinating national & international activities, identifying & promoting projects that meet developmental & environmental objectives resulting in accelerated national growth on an equitable, low-carbon path
Methods and Procedures:	• Put in place national CDM secretariats as apex, focal organisations for national & international stakeholders • Develop consensus on role of national secretariats through workshops, public discussions, InterNet for a; • Define co-ordination role of secretariats through workshops with key national stakeholders (including private sector, banks, investors, etc.) • Set national CDM Web sites & project Web site for presenting project results, for presenting case studies, other materials for international review & comment, and to attract international investment; • Conduct training on development of baselines for project identification using MESAP/RES, GHG & development impact, verification; modes & means for national an international certification; means to identify best projects & attract investment; • Define initial pilot CDM projects & develop macro-baseline framework, and specific project baselines with GHG, development, economic & financial costs & benefits using MESAP/RES; • Hold international workshops in the 3 ACP countries involving potential international investors, bilateral & multilateral donors, national stakeholders; • Identify pipeline projects using MESAP & other national tools • Develop case studies based on pilot projects & pipeline projects; • Develop verification, certification & validation procedures involving key national & international agencies that are streamlined yet achieve UNFCCC & national objectives • Hold international seminar to present results, present case studies & project results for international review & comment on project's Web sites; • *Develop national action plans for encouraging and promoting qualified* investments under CDM.

Experience:	none yet
Crucial factors and conditions:	ownership on the side of the partner organisations

Project Title:	National Communications Support Programme on Climate Change
Host country:	Developing countries
Partner:	National Focal Points on Climate Change
Contact person:	Mr. Richard Hosier, UNDP
Project Purpose:	Assistance developing countries in awareness obligations UNFCCC , training material, provide expertise, organisation of regional workshops, Web-site sharing, hotlines for world wide information
Executing Agency:	UNDP, Global Environment Facility (GEF), 304 East 45th St, 10th floor, One UN Plaza, room FF 1094, New York, N.Y. 10017, USA
Project period:	1999-2001, 24 months
Financial support:	Euro 720 000 (26 % of total project cost)
Main objectives:	Completion of national communications thus improving quality and timeliness in submission of national communications.
Methods and Procedures:	Organise help-desks, hotlines, develop common shared information system, organise training, organise regional and thematic workshops
Experience:	
Crucial factors and conditions:	participatory planning and execution of activities

Project Title:	Support for the participation of experts from ACP countries in the IPCC process and for the dissemination of IPCC results in ACP countries
Host country:	Global
Partner:	ACP countries
Contact person:	Renate Christ
Project Purpose:	To contribute to abatement of global climate change trough providing comprehensive assessments of the state of scientific technical knowledge of causes and potential impacts of climate change and appropriate response options to mitigate and adapt to climate change
Executing Agency:	Intergovernmental Panel on Climate Change established jointly by the World Meteorological Organisation (W.M.O.) and United Nations Environment Programme (U.N.E.P.) c/o W.M.O. 41, Av. Giuseppe-Motta, P.O. Box 2300, CH 1211 Geneva 2
Project period:	2000 - 2002
Financial support:	Euro 500.000,- over 3 years (12,5% of total)
Main objectives:	Third IPCC Assessment Report and 4 Special Reports completed, presented to the UNFCCC and results widely disseminated
Methods and Procedures:	Assessment of peer reviewed literature and meetings of writing teams for IPCC reports, workshops if necessary to fill information gaps, review of IPCC draft reports, translation, publication and outreach seminars
Experience:	
Crucial factors and conditions:	

Project Title:	Pico-hydro village power
Host country:	Ethiopia
Partner:	local community
Contact person:	Dr. Nigel Smith
Project Purpose:	1)To demonstrate that pico hydro is a sustainable and affordable technology 2) To establish an infrastructure to encourage manufacture, sales and productive use of the system
Executing Agency:	Nottingham Trent University Faculty of Engineering and Computing Of Electrical and Electronic Engineering Burton Street, Nottingham NG1 4BU, United Kingdom
Project period:	1999 - 2001
Financial support:	Euro 108.563 (43 % of total project cost)
Main objectives:	Assess socio-economic and environmental impact, policy guidelines and manuals, market research, training
Methods and Procedures:	Organisation demonstration of system, guidelines, training
Experience:	
Crucial factors and conditions:	

Project Title:	Regional Biomass Energy Conservation Programme for Southern Africa
Host country:	Lesotho, Malawi, Mozambique, Namibia, South Africa, Zimbabwe
Partner:	SADC Network
Contact person:	Dr. Agnes Klingshirn
Project Purpose:	Enhance capacities and commitments of governments and institutions to plan and implement integrated biomass energy conservation programmes.
Executing Agency:	GTZ, Dag-Hammarskjold-Weg 1-5, 65760 Eschborn, Germany
Project period:	1998 - 2001
Financial support:	Euro 1.6 million
Main objectives:	Fulfill energy needs of households and small-scale industries in a socially and environmentally sustainable manner
Methods and Procedures:	1. South-south exchange of information on good practice: A managementinformation system about biomass energy demand and supply, energy-efficient technologies, national biomass conservation strategies has been set up and is accessible to partner organisations. 2. Capacity building: Partner-country specialists are trained in planning, implementing and monitoring integrated and sustainable biomass energy conservation projects 3. Pilot projects: The introduction of integrated energy-saving measures for households and small businesses into interested projects in pilot areas is enhanced. 4. Advisory services for planning integrated biomass energy conservation measures are used by national policy and decision-makers of institutions/organisations. 5. South-south networking: A support network of local organisations in the region has been established and provides advisory services for the implementation of biomass energy conservation measures.
Experience:	Similar programmes in West and East Africa were very successful in cutting down biomass energy requirements
Crucial factors and conditions:	

Project Title:	COGEN
Host country:	ASEAN
Partner:	Asian Institute of Technology, Bangkok
Contact person:	Mr. M. Pennington, e-mail: cogen@ait.ac.th
Project Purpose:	The EC-ASEAN COGEN Programme is a co-operation programme between the European Commission (EC) and the Association of South East Asian Nations (ASEAN), co-ordinated by the institute of Technology (AIT, Bangkok, Thailand). Its aim is to accelerate the implementation of proven technologies generating heat and/or power from wood and agro-industrial residues, through partnerships between European and ASEAN companies.
Executing Agency:	COGEN Secretariat, AIT, Bangkok
Project period:	1991 – 1998
Financial support:	30 million MEURO
Main objectives:	Some technologies are technically and economically viable but are not implemented in ASEAN because they are not well-known and have not been tested under ASEAN conditions. To overcome this obstacle, the EC-ASEAN COGEN Programme will bring technical and financial assistance to implement FSDPs. An FSDPs can be defined as the implementation of a proven technology on a full scale basis in order to demonstrate its technical reliability and economic viability. Therefore, an FSDP constitutes a shop window in ASEAN, aimed at convincing other potential end-users to select the technology.
Methods and Procedures:	The EC-ASEAN COGEN programme can support: - Investment assistance, - Training in Europe and ASEAN, - Monitoring by an independent organisation
Experience:	To ensure the maximum replication of the demonstration projects, an independent technical and economic monitoring of the equipment will be performed. The project results, including economic benefits for the end-users, will be widely advertised in the region, through media and printed material, as well as visits to the plants by publics and private sector representatives from all ASEAN countries.
Crucial factors and conditions:	

Project Title:	Optimal Utilisation of Energy in Latin America (ALURE)
Host country:	Latin America
Partner:	ALURE is made of different projects in various LA countries. There has been assigned to various executing agencies (mainly energy consortia from the EU).
Contact person:	Mr. J.F. Aguinaga, European Commission
Project Purpose:	ALURE is a co-operation programme between the EC and the Latin America which aims at bringing European and L.American energy actors closer to each other
Executing Agency:	Alure Support Team: www.ALURE.NET disseminates information in Spanish, Portuguese, French and English.
Project period:	1998-2002
Financial support:	50.000.000 Euro (EC contribution: 25 Mio .Euro)
Main objectives:	The programme aims at improving the performance of the energy companies at technical, economic and financial level with emphasis on the rapidly growing sub-sectors (e.g. electricity, natural gas); It also contributes to to the adaptation of institutional and regulatory framework. All of its activities are planned with a view to promoting sustainable development.
Methods and Procedures:	Capacity building
Experience:	The companies involved are interested primarily, in energy efficency oriented projects which shows that this is a much promising area for co-operation in the region. Intended generally to promote rational energy use, this type of projects aim specifically to reinforce policy for more efficient energy by demonstrating the feasibility of new schemes at all different policy levels (federal, state, provincial and local). Some, examples, can be mentined: • Strategic support for energy efficiency in Brazil: In cooperation with ELETROBRAS and a EU consortium (France, Spain and the United Kingdom). • Energy savings in industry, transport and services in Peru: Partners from Spain, Italy and the Netherlands are supportingCENERGIA in its cogeneration efforts. • Establishment and enforcement of energy standards and rules in the Chilean building industry: The ministry for housing and town planning is receiving advice from partners in Spain, Greece, Italy, the Netherlands and Portugal. • Development of a policy for rational use of electricity in Argentina: The energy board has partners from Denmark, Spain and France.
Crucial factors and conditions:	To be successful, a technology transfer or know-how transfer must be done between actors able to assimilate this transfer (basically local private companies). A correct policy framework conducive to the right energy pricing is necessary for encouraging investment and innovation

Project Title:	Solar Energy for the Outer Islands
Host country:	Kiribati
Partner:	Government of Kiribati
Contact person:	Carl-Henrik Hall, European Commission
Project Purpose:	Improved living standards on outer islands and reduced migration to main island
Executing Agency:	Government of Kiribati
Project period:	2000 - 2005
Financial support:	Euro 4 million
Main objectives:	Provide energy to households
Methods and Procedures:	Installation of solar panels and electrical devices, training in maintenance
Experience:	new project
Crucial factors and conditions:	

Other European Commission Projects and Activities Related to Capacity Building in Developing Countries with Impact on Climate Change

Mediterranean and Gulf Countries

The Mediterranean region has enormous strategic importance for Europe particularly in the energy sector where it plays a significant role in oil and gas transit. Many of the countries in the region are major energy producers and big players in the maritime transfer of hydrocarbons. In the same way, the Gulf countries relationship with Europe is one of energy interdependence both as consumers and producers of energy. SYNERGY therefore gears its activities in the region towards both promoting energy investments and energy networks as well as supporting energy policy development and dialogue.

EU-Mediterranean Energy Policy Dialogue

1998 saw Phase 2 of this project examining the possible application of the Energy Charter Treaty to the countries of Morocco, Jordan, Lebanon and the Palestinian Authority. Different themes are envisaged in the project for each country:-

- a workshop in Jordan on the subject of the Institutional Framework for Renewable Energy (solar, water heating, wind);
- high level meetings in the Lebanon on Energy Policy and the Environment focussing on how a national energy policy could be agreed ;
- assistance to the Palestinian Authority in preparing an energy dialogue document;
- detailed work in Morocco on the Energy Charter Treaty. Four key Ministries have posed a set of questions for the Charter Secretariat. Morocco has a definitive interest in acceding to the Treaty in the context of its status as a transit and storage country and membership of the Treaty could help secure much needed investment.

Euro-Med Training Project

The aim of this project was to examine the role of the energy engineer in the context of the establishment of a Euro-Med Energy Policy Network. Among the issues analysed were existing training programmes, university curricula and their response to industry requirements, financial support, energy efficiency and the environment. The key components are:-

- Definition of the role of the modern energy engineer;
- Analysis of current situation;
- Proposal to establish a network;
- Project management and definition.

The project was developed via a workshop in Athens in December 1998 at which twelve of the countries in the region were represented. The workshop covered a wide range of topics including the global energy market and the Mediterranean region, energy training in the Mediterranean (trends, status) and ideas on the kind of engineer appropriate for the energy environment of tomorrow.

LPG Markets in the Mediterranean

This study will provide a perspective on LPG markets in the Mediterranean up to the year 2020 with a focus on Turkey and Morocco. There appears to be too many distributors provoking a need for rationalisation. The study will comprise a country by country analysis looking at production and utilisation, transport, stocking and imports. The issues covered are:

- Energy demand up to 2020;
- Natural gas supplies;
- Supply diversification;
- Environmental protection.

The aim is to diffuse the results in order to implement real projects and joint ventures rather than produce a theoretical exercise.

ENERGIA 98

This project is a mix of studies and seminars under the broad umbrella of the Euro-Med industrial partnership. The aims include:-

- Establishment of an energy policy for the Mediterranean which will facilitate sustainable development;
- Energy programming;
- Energy exchanges;
- Security of energy investments;
- Clean and efficient energy technology.

The project aims to mobilise the private sector in Europe and in the Mediterranean and enable investment opportunities to be identified. Specific countries involved include Morocco, Tunisia, Egypt and Israel. The areas of interest are gas utilities and electricity production, clean technologies and new and renewable energies. The work will lead to the establishment of a steering committee, a seminar in Brussels, meetings of industrialists, the identification of new enterprises and the dissemination of information. Med-ENERGIA has seven European partners (France, Italy, Belgium, Austria, Spain, UK and Greece).

Policy dialogue with Yemen

The aim of this project is to promote energy policy dialogue between the EU and Yemen by:-

- Analysing the country's energy sector;
- Identifying EU policies of relevance to Yemen;
- Training decision makers;
- Disseminating information via brochures and workshops.

Low oil prices have had an adverse effect on Yemen's economy as has an uncertainty in the level of oil reserves. In addition the power sector has institutional weaknesses and inefficiencies. There is a need to define a clear energy policy for the long term with an emphasis on renewables. A kick-off meeting took place in Athens and seminars will discuss the electricity, renewables and oil and gas sectors. The aim is to produce an energy policy document and an RES atlas for the country (solar, biogas, wind).

Conference on energy investments in the Mediterranean

The conference took place in Lyon in March, 1999 in the context of the Euro-Med Energy Forum and the action plan for 1998-2002 which was adopted in May 1998 and which had as its priorities, security of supply., competitiveness and environmental protection. At the conference, there was a presence from the European and Mediterranean Parliaments. This was a direct as a follow up to a conference in Brussels in 1997 which had as its aim the promotion of energy investments.

The conference provided a forum for debate on the need for legal and institutional evolution in the Mediterranean to prepare for a full free trade zone and the involvement of local and foreign investment. The aims were to:-

- Examine the new financial environment and the implications for the Mediterranean region;
- Consider the investment needs in energy infrastructure;
- Examine the legal and institutional issues.

The conference concluded that:-

1. There was an urgent need for legal and institutional reform in the region;
2. Preparations should be made to enable fuel trading to take place unhindered;
3. Steps should be taken to facilitate local and foreign investment.

Asia

SYNERGY actions in Asia are consistent with the Commission's Communication on "Europe-Asia Co-operation strategy for Energy" endorsed by the Council of Ministers in May, 1997. The aim is to facilitate dialogue between the EU energy industry and decision makers in the region. The potential for the electricity market is huge where for example in China demand is growing by 3% per year and a quarter of the 1.2 billion population have no access to electricity at all. The promotion of regional energy integration in the ASEAN area is also a priority, particularly given the recent economic problems in South-East Asia.

ASEAN Electricity Interconnection and Deregulation

This was an integrated project and a direct follow-up to the visit to the region by Commissioner Papoutsis in June, 1997. The rationale is to increase mutual understanding between the ASEAN

utilities and policy makers on the one hand and European utilities and industry on the other. The project involved:-

- High level meetings between interested groups;
- A study tour in Europe focussing on grid interconnections;
- A round table in Brussels in May,1998;
- A round table in Singapore in July, 1998.

Electricity is a key component of the EU/Asia energy co-operation strategy. Given the economic growth in the region, most ASEAN governments are pursuing deregulation policies in order to reduce public debt, facilitate interconnection, enhance security of supplies, assist in economic exchanges and protect the environment. The project has resulted in:-

- Dialogue at all levels;
- The identification of priority actions;
- The production of quality publications and newsletters.

Energy efficiency programme in Vietnam

In order to assist the Vietnamese authorities in the implementation of this programme, SYNERGY supported the following activities:-

- The preparation of training for government personnel and factory managers;
- On the job training for local partners;
- Demonstration of energy conservation techniques;
- The development of an effective training and implementation model;
- The preparation of viable and environmentally friendly demonstration projects;
- Preparatory work relating to the establishment of an energy conservation centre in Hanoi.

The outputs of this project include:-

- Demonstration of energy efficiency technology;
- 10 training workshops;
- On the job training of local trainers (20);
- Case studies and training materials;
- Preparation of 10 bankable, demonstration projects;
- Establishment of an energy Conservation Centre.

The rationale of this project is self help and involving local partners to the maximum extent. The emphasis is on curriculum development, energy management awareness and motivation, technical and financial issues, and the inclusion of factories (textile and paper). The target group includes trainers, factory managers, plant engineers and operators.

Renewable Energy in South-east Asia

The aims of this project are to:-

- Advance EU company involvement in RES in the region;
- Enable countries to be aware of the latest technical, financial and market developments;
- Establish a network of agents;
- Facilita.e technology transfer;
- Win new contracts for EU companies;
- Focus on wind, photo voltaic and biomass

Countries in the Mekong Delta region have shown a keen interest in RES. In order to identify the key issues and initiate dialogue with the EU, two seminars were held to help to increase EU penetration in energy projects in Vietnam and Laos. These events focussed on business meetings and workshops where all the interested parties participated - EU companies, local industry, national utilities. Site visits and a newsletter are also envisaged. The issues covered by the project are the barriers to investment, lack of government interest, increasing international involvement in the process (for instance from the World Bank) , lack of data, mobilisation of public and private sector and the involvement of the national utilities.

Energy for sustainable development in China

This project centred on a visit to China of a high level delegation which was co-ordinated by the European Energy Foundation. The delegation included MEPs and industrialists interested in the possibilities for developing business in China and identifying areas of co-operation. The visit culminated with a conference in the Great Hall of the People in January, 1999 in Beijing attended by all the relevant State agencies. Site visits were also arranged such as a visit to Pudong Industrial area, Shanghai. The European delegation included representatives from major energy companies in the areas of coal, oil and gas, electricity, nuclear, renewables, equipment suppliers and transport. One major issue to emerge was the market possibilities for oil and gas imports to China. An inter-parliamentary round table was organised and a workshop with the Shanghai Municipal People's Congress. The EU participants made a number of technical presentations and issues at the forefront were:-

- Renewable energies;
- Energy efficiency;
- Energy supplies for Chinese families countrywide;
- Oil and gas;
- Coal gasification.

Training of Chinese Engineers

This is an ongoing training project in China and in Europe. The aims are:-

- To improve local capacity in energy management for major Chinese cities;
- To involve Chinese industry in the programme;
- To facilitate energy saving investments.

- To improve business planning.

The programme involved the organisation of five energy management training courses with 250 participants and included management and financial analysis, a study tour for twelve Chinese in Europe (Italy, Sweden, France) and the training of twelve Chinese trainers . The course content covers-

- Data analysis;
- Management concepts;
- Energy efficiency investments;

The subjects are geared towards creating for the participants a complete economic analysis of development projects. On the practical side, the areas covered were energy audits, energy management of boilers, ovens and furnaces, DSM, energy recovery, heat and compressed air distribution and environmental issues.

EU-India Business Development

This SYNERGY sponsored forum took place in New Delhi in March, 1999 with the emphasis on renewable energy business development. It is clear that much work is required in order to promote commercial interaction between EU and Indian companies. In particular, European companies need to be made aware of the opportunities for technology transfer despite the fact that the cost of RE technologies remains relatively high.

The forum showed that the Indian authorities must also intervene to provide incentives in an area which is gaining much importance in the context of international agreements on environmental protection.

Latin America

Despite some economic setbacks, energy demand continues to grow in Latin America and accordingly SYNERGY will concentrate its activities on the promotion of energy efficiency and renewable energies. Dialogue will continue in particular with Venezuela given its world importance as an oil producer and its key role in the world energy market. Specific support is required to help EU companies to penetrate those markets by way of developing the legal and fiscal frameworks which can help in the restructuring process currently taking place in the region's energy sector.

Energy economics and policies in Latin America

SYNERGY continued to support the postgraduate course in Energy Economics and Policies at Bariloche, Argentina (IDEE). The course modules cover a wide range of subjects such as energy sourcing, the interrelation between markets and the environment, analysis of energy systems in Latin America, socio-economic factors and the restructuring process involving a case study.

The course remains extremely popular and in 1998 there were 22 participants from 12 countries. The EU financially supported 7 scholarships.

Third Party Financing in Argentina

This SYNERGY supported study will look at how, through small and medium sized companies, a third party financing arrangement can lead to the implementation of innovative energy projects. The project kicked off with a TPF workshop and an Experience Exchange forum in Buenos Aires. The aims are to: -

- Produce a TPF brochure relevant to Argentina;
- Introduce the concept of TPF via the workshop;
- Focus on the opportunities and barriers (legal and institutional);
- Identify TPF opportunities in the renewable sector;
- Disseminate information.

The forum helped to build partnerships and strategies, give practical examples and highlight the dissemination and reporting arrangements which are available through the OPET, SAVE and the ESCO networks.

Geothermy in Latin America and the Caribbean

Twelve countries are involved in this project including Argentina, Chile and Honduras. The aim is to look at the institutional and regulatory changes which could extend the area of activity of this energy source and promote commercial and technical co-operation between the two regions. Essentially the rationale is to promote geothermy by way of interaction between Latin America and the EU relating to institutional capacity and the regulatory systems. The activities will be geared towards:-

- Overcoming the legal obstacles;
- Promoting the financial solutions;
- Devising national strategies (promotional events, seminars, publications);
- Facilitating commercial exchanges.

Particular issues in some countries will be targeted e.g. the regulatory situation in Honduras, strategic studies in Ecuador, regional centre study involving the EU Guatamala and Costa Rica. A promotional event will take place in Argentina ands the project will will provide outputs such as strategic studies, promotional activities and an inter-parliamentary meeting.

Rational use of energy in Venezuela

This project complements the ongoing relationship between Europe and Venezuela in the context of the producer/consumer dialogue and concentrates on energy efficiency and the use of Demand Side Management. Three mechanisms are used:-

1. An energy master plan;
2. A seminar on energy efficiency;
3. Energy efficiency financing.

In this way, all the main players in Venezuela can be involved, in particular the banking institutions which are in a position to devise new financing techniques.

Gas distribution in Venezuela

A seminar was held in Caracas in March 1999 on the subject of natural gas distribution and end use in urban areas. The aim was to detail the European experience in this area and its relevance for Venezuela. The local partner was the Venezuelan Ministry of Energy and Mines who is anxious to facilitate partnership and business co-operation with Europe. The seminar examined:-

- Market opportunities;
- Planning and development of gas systems;
- Construction;
- Gas networks;
- Maintenance and safety;
- Financing;
- Appliances and equipment.

Basic lessons on this subject have already been learnt in Europe and the USA. These must now be applied to new markets like Latin America where the concept can be used to better effect in less regulated markets where individual companies are responsible for their energy costs.

ESCO's in Latin America

Energy efficiency has acquired an increasing importance in Latin America as a result of increased economic activity and energy demand, allied to the need to reduce emissions and the background of a move towards market liberalisation in the region. Energy service companies have played a significant role in this area both in Europe and the USA but have not as yet developed in Latin America.

This SYNERGY supported project will deliver an analysis and recommendations which will build on the interest already shown in this subject as displayed at a seminar organised by the Mexican Energy Agency in October 1997. The basic aim is to provide information for interested parties in the EU and Latin America and to facilitate contacts and interest in the market potential in Latin America. The themes of the project are:-

- Review of the market;
- Strategy development;
- Dissemination and education (seminar/publications);
- Project identification;
- Eliminating legal, financial and ownership problems.

Basic lessons on this subject have already been learnt in Europe and the USA. These must now be applied to new markets like Latin America where the concept can be better utilised in less regulated markets where individual companies are responsible for their energy costs.

Africa

In Africa, SYNERGY intends to help establish the energy policy tools and structures which will be required to facilitate co-operation within the framework of the Lome Convention. Energy projects must make a contribution to sustainable development in the region. The priority areas are rural electrification and renewable energies and co-operation continues with regional organisations such as SADC.

Rural electrification in Africa

In 1998, the ongoing SCARABEE Project (in Francophone Africa) continued with the development of project documentation supported by information sessions and the establishment of five national groups. The aim is to establish a network and a team of experts to co-ordinate actions in the domains of rural electrification and decentralised systems. Other important features of the project include the involvement of all the financial actors, pollution control measures, alternative energy sources and the introduction of European companies to the region.

Energy policy development in Cape Verde

This project was carried out in co-operation with the Higher Technical Institute of the University of Lisbon and focussed on electricity and oil distribution and their relevance for the Island of Cape Verde. The areas covered were technical support, energy policy advice, training, energy efficiency in buildings, energy statistics, planning and public awareness. A steering committee will be established to organise follow-up activities.

Energy Integration in South Africa

Phase I of the project consists of an assessment of different strategies and experiences for the SADC countries while Phase II aims to improve overall co-ordination. To achieve this, working groups have been formed to identify areas of co-operation and to consult with international financiers with regard to the potential for closer co-ordination in the energy sector.

The background to this project has been the economic and political changes which have occurred in Southern Africa which in turn have generated the need for development of the energy sector which is held back because no energy policy as such exists.

The project aims to develop a strategic approach to improve co-operation within SADC and establish co-operation networks with the EU which will supplement this work. The basic need for the region is an efficient transport and distribution system for energy by way of inter-state agreements. There is also enormous potential for the use of renewable energies. The end result will be a signed declaration by decision makers agreeing an action plan to increase energy co-operation.

Energy database acquisition and management system - Benin

Benin relies totally on imports for its oil supply thereby putting increasing strain on its indigenous forestry resources. Oil makes up 24% of the energy mix and biomass 75%, mostly for use in the domestic sector. There is a need to devise a strategy to assist decision makers in improving energy efficiency and reducing energy imports.

This SYNERGY supported study aims to produce an annual report on the energy situation in Benin which will include energy balances and energy efficiency indicators. The work will involve:-

- An analysis of the existing data base;
- Assessing the validity of the data;
- Data acquisition in key areas;
- Analysis of the domestic and transport sectors;
- Prioritising actions for the future.

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Capacity Building Submission of the United States
Supplemental information to that contained in the Second U.S. National Communication on activities and programs which facilitate capacity building in climate change

MULTI-REGIONAL PROJECTS

Biophysical Resource Appraisal Support System (BRASS), USDA

USDA[2] teamed up with the Natural Resources Conservation Service with the objective to compile and facilitate the dissemination basic land resource information to aid in the assessment and monitoring of desertification and impacts of climate change. BRASS, developed in collaboration with many countries, meets this objective by providing basic information on land resource types, conditions, and use for assessments of changes induced by land use and climate change. Methods for making such assessments are being developed for validation and use by other countries.

Cities for Climate Protection Campaign in Latin America and Developing Countries in the Asia Pacific Region, USDOE

USDOE is collaborating with the International Council for Local Environmental Initiatives (ICLEI) to increase the use of energy efficiency and renewable energy technologies in various cities in Latin America and the Asia Pacific Region.

Energy and Environment Training Program, USAID

USAID provides training held in the United States for host country professionals in the areas of: Economic and Financial Evaluation of Energy Efficiency Projects; Monitoring & Verification of Greenhouse Gas Emissions; Implementation of Power Sector Regulatory Reform; Economic and Financial Evaluation of Renewable Energy Projects; Application of ISO 14000 Environmental Management Systems for Municipalities; Integrated Resource Planning; Emissions Trading; Macro-Economic Modeling for Climate Change; and Monitoring & Verification of Greenhouse Gas Emissions (Land Use).

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[2] Commonly used abbreviations for U.S. Government Agencies include:

US-AEP	United States -- Asia Environmental Partnership
USAID	United States Agency for International Development
USCSP	United States Country Studies Program
USDA	United States Department of Agriculture
USDOE	United States Department of Energy
USEPA	United States Environmental Protection Agency
USIJI	United States Initiative on Joint Implementation

Energy Efficiency Development, USAID

USAID awarded a grant to support the development of energy efficiency activities in several countries, including India, Ghana, and Ukraine. These activities focus on the development of municipally based efficiency programs utilizing indigenous non-governmental organizations and U.S. efficiency experts.

Energy Efficiency Harmonization, Distribution, and Promotion, USAID

USAID provides expertise in the area of energy efficiency, particularly with regard to regional harmonization of standards, distribution of equipment, and promotion of initiatives to leverage private sector investment in Asia and Latin America.

Energy Efficiency Standards, Economics, and Policy Program, USAID, USDOE

USAID and USDOE support USDOE's Lawrence Berkeley Laboratory provision of expertise in energy efficiency standards as well as energy policy and economics related to greenhouse gas emissions in developing countries.

Energy Partnership Program, USAID

USAID, through the U.S. Energy Association, is implementing the Energy Partnership Program in Asia, Africa, Latin America, Central and Eastern Europe, and the Former Soviet Union. The program's main objective is to provide a mechanism for the U.S. energy industry to transfer its experience in market-based energy production, transmission, and distribution to its international counterparts, while providing U.S. participants with the opportunity to learn about the energy industry in other countries. Regional program activities encompass such topics as regulation, the environment, system reliability and efficiency, renewable energy, customer service, and financial management, with an emphasis on climate change mitigation.

Environmental Management Systems Task Order, USAID

The primary objective of this activity, conducted by USAID, is to demonstrate the feasibility and benefits of using an Environmental Management Systems approach to reducing pollution in municipalities. Through activities in the areas of energy efficiency, reduction of greenhouse gas emissions, and pollution prevention and control, a holistic approach to improving long-term environmental performance is promoted.

Global Guardianship Initiative, USDOE

USDOE is collaborating with partners to establish models for community renewable energy deployment as a strategy for protected area management and an alternative to grid extension in developing countries in Latin America and Asia.

Global Observation of Forest Cover Workshop, USAID

In March 1999, USAID and its forestry partners provided fellowship support to developing country participants. The funding provided fellowships to foresters from South East Asia, Latin

America and Central Africa for training in the U.S. in remote sensing data application and modeling to describe natural resources and to apply this information to a decision-making framework. The funds also contributed support to a follow-on workshop on the Global Observation of Forest Cover Tropical Forests.

Industrial Peer Exchange, USAID, USEPA

The USEPA Multimedia Industrial Peer Exchange Climate Wise Program, U.S. Asian Environmental Partnership (US-AEP), USAID, and USEPA, in conjunction with the efforts underway in the Philippine and Mexican International Council of Local Environmental Initiatives (ICLEI) Cities for Climate Protection campaigns, are assisting the participating local governments in developing outreach programs to their industrial base to promote the reduction of greenhouse gas emissions and other pollutants. Local industrial peer exchange sessions are created for companies, government officials, ICLEI, and U.S. Government staff to exchange innovations, ideas, and opportunities to reduce greenhouse gas emissions and other forms of pollution. Companies use the expertise and information drawn from the peer exchange sessions to develop action plans that outline greenhouse gas emission, solid waste, water use, and hazardous waste reduction opportunities. Activities include recruitment, emissions tracking software training, technical assistance, local capacity building, and the networking of industrial environmental managers.

International Cleaner Production Cooperative, USEPA

The International Cleaner Production Cooperative provides a single on-line point of access to cleaner production information from around the world. The Cooperative retrieves data on cleaner production from diverse Web sites maintained by international organizations, industry groups, non-governmental organizations, and national and local governments.

International Co-Control Analysis Project: Estimating the Environmental Benefits of Greenhouse Gas Reduction, USEPA

USEPA is assisting developing countries in evaluating the environmental benefits of technologies and policies for reducing greenhouse gas emissions. Under this initiative USEPA is providing technical and financial support to six developing countries to assist with analysis of the environmental benefits associated with measures that reduce greenhouse gas emissions. USEPA is collaborating with Argentina, Brazil, Chile, China, Korea, and Mexico in this effort. Led by teams of experts from these countries, along with the technical support of USEPA staff and consultants, the work is tailored to the needs and priorities of each country. USEPA supplies access to quantitative models and analytic tools and provides technical assistance in conducting these environmental assessments.

International Council for Local Environmental Initiatives, USAID

The International Council for Local Environmental Initiatives (ICLEI) Cities for Climate Protection (CCP) campaign, in partnership with state and national governments, is engaging a group of cites in the Philippines and Mexico in an effort to reduce local greenhouse gas

emissions. Activities include developing a corporate inventory of local greenhouse gas emissions, setting targets for emissions reductions, developing local action plans for emission reductions, building local capacity, providing technical assistance, and networking with U.S. and other participating CCP cities.

International Industrial Efficiency Assessments, USDOE

USDOE is providing technical support to and collaborating with developing countries to encourage and implement measures that increase industrial energy efficiency and productivity. USDOE and U.S. universities participating in the Industrial Assessment Center (IAC) program are helping build developing countries' technical and institutional capacities to provide recommendations to local manufacturing plants. These recommendations include strategies for controlling costs through energy efficiency improvements, increased productivity, and waste reduction. Technical assistance includes training by U.S. engineering faculty/student teams and the analytical tools and experience developed from the domestic U.S. IAC program. Adapting these to local conditions and facilitating collaboration between in-country government agencies, local universities, and international funding sources, the USDOE will create the local capacity for these programs to be self sustaining.

International Methane Mitigation Conference, USEPA

This conference, in Novosibirsk, Russia, in June 2000, in cooperation with the Russian Academy of Sciences, will bring together international leaders in business, policy-making, and engineering to consider opportunities and issues in mitigating emissions of methane. Topics of the workshop will include: the science and policy implications of methane control measures; costs and benefits of different methane mitigation targets, focusing on the economic and environmental co-benefits of different measures; national and regional strategies to reduce emissions; specific mitigation options, and project opportunities, in reducing emissions from: coal mining, natural gas systems, ruminant livestock, solid waste disposal, and other sources, anthropogenic and natural.

International Motor Challenge Program, USDOE

USDOE is partnering with developing countries to build on the U.S. experience and implement country-specific programs to help local manufacturers reduce energy costs and increase productivity through improved industrial motor systems. USDOE is working with several developing countries to adapt this U.S. effort to local conditions. The program has already been initiated in China, India, and South Africa.

International Workshop on the Development of National Action Plans, USAID, USEPA, the Department of State, USCSP

In December 1999, representatives from twenty countries participated in this one-week workshop in the Philippines. The objectives of the workshop were to: share experiences on processes these countries have used to develop national action plans; identify and discuss mitigation and adaptation measures; link climate change action plans to sustainable development and other social policy objectives; examine the use of action plans in the preparation of national

communications; assess future needs for technical assistance; and identify opportunities for linkages with other climate programs.

Moving Markets for Energy Efficiency (MMEE) Project, USAID

USAID supported the development of an analytical framework and supporting techniques to better define and realize successful energy efficiency investments. The MMEE project includes application of the methodology in India, Egypt, and Brazil and development of electronic information resources.

Reduced Impact Logging Guidelines and Workshop Proceedings, USAID

USAID and its forestry partners produced and distributed reduced-impact logging guidelines and the publication of workshop proceedings. The guidelines and procedures are aimed at forest harvesting and management of secondary forests to reduce the negative impacts of harvesting and result in improved forestland management.

Renewable Energy Applications and Training, USAID

USAID supported the establishment of a network of Renewable Energy Program Support Offices (REPSOs) to build local capacity in renewable energy, accelerate its commercialization, and increase access to energy in rural areas.

Rural Electrification Services, USAID, USDOE

USAID supports the National Rural Electric Cooperative Association's identification of affordable options for the provision of electrical services to rural areas. Also, USDOE provides technical assistance to support the development of pilot renewable energy and hybrid electrification projects.

Staff Assistance to World Bank, USDOE

USDOE's National Renewable Energy Laboratory is providing support to the World Bank, including assigning a senior staff person to the World Bank for two years in support of the Bank's Solar Initiative and related renewable energy project and policy activities in developing and transition countries. Specific staff support to Bank activities include: support for the Bank's project identification mission to China; co-leading the Bank team that developed the Solar Development Corporation, a new lending institution being created by the Bank for photovoltaics; and creating and managing the activities of the Energy and Environment Steering Committee, a technology advisory committee dealing with renewables and efficiency that include developed and developing country members. Project specific support is being provided in China, Cape Verde (tentative), Malawi, South Africa, Botswana, Zambia, Indonesia, Philippines and Brazil.

Strategic Planning on Global Climate Change, Renewables, and Energy Efficiency, USAID

USAID supports USDOE's Oak Ridge National Laboratory in the provision of strategic planning services in renewable energy and energy efficiency.

Technology Cooperation Agreement Pilot Project, USAID, USEPA, USDOE

Through the Technology Cooperation Agreement Pilot Project (TCAPP), USAID, USEPA, and USDOE collaborate together to assists the governments of Brazil, China, Egypt, Kazakhstan, Korea, India, Mexico, the Philippines, and the Southern African Development Community (SADC) (in collaboration with the Climate Technology Initiative) in attracting investment in clean energy technologies that meet their development needs and reduce greenhouse gas emissions. The U.S. Government launched TCAPP in August 1997 to provide a model for a country driven and market relevant approach to implementation of technology transfer under the United Nations Framework Convention on Climate Change. TCAPP provides a vehicle for assisting developing countries in removing barriers and accelerating investment in clean energy technologies, including renewable energy, energy efficiency, and natural gas. Government-led teams in Brazil, China, Kazakhstan, Mexico, and the Philippines have all established their technology cooperation priorities and are currently addressing implementing actions to attract private investment, ranging from policy reforms to investment solicitations. Egypt and Korea joined this effort in 1999. TCAPP is also assisting the Climate Technology Initiative with a similar program for the 14 countries in the Southern African Development Community. The international business community is actively engaged in the program to assist countries with the design of investment actions and to respond to new investment opportunities. USDOE's National Renewable Energy Laboratory leads implementation of this program and the Business Council for Sustainable Energy – an umbrella organization for companies in the natural gas, renewable energy, and energy efficiency sectors with alliances worldwide – coordinates private sector participation activities. Other bilateral and multilateral donors, and technical institutions also participate in this program.

Travel Support for Developing Country Participants, USAID

USAID supports developing country participation at various international climate change meetings, conferences, and technical workshops.

Tropical Forestry and Global Climate Change Research Network (F7 Project), USEPA

The F7 project plans to assess the potential implications of the UN Framework Convention on Climate Change (UNFCCC) and other potential agreements for the forestry sector in key tropical forest countries, building on previous analyses by the group. Project activities include helping in-country analysts to improve their forestry (and possibly agricultural) sector greenhouse gas emissions inventory estimates, to identify and evaluate potential national policy and project-level sustainable forestry management options with climate change benefits from late 1998 to late 2000. Several scenarios of baseline and potential sustainable forest management national policies are modeled and assessed in terms of their economic, climate change, and other benefits. The project is funded by USEPA, and implemented with its partner, USDOE's Lawrence Berkeley National Laboratory. Work has been conducted with analysts in India, Indonesia, Thailand, Malaysia, China, Mexico, Brazil, Tanzania and Nigeria over the past eight years on climate change and forestry inventory and mitigation analyses. The project has trained in-country experts to run the COPATH and COMAP computer models that were collectively built,

and to publish the results. Several workshops are being developed to bring together analysts and other interested parties in several of the F7 countries to compare analyses, and raise technical and policy issues.

U.S. Country Studies Program, USEPA, USAID, USDOE, NOAA, and the Departments of State and Commerce

The U.S. Country Studies Program (USCSP) was initiated in 1992 to facilitate the participation of developing countries and countries with economies in transition under the UN Framework Convention on Climate Change (UNFCCC). The USCSP offers funding and expert assistance for creating a national inventory of greenhouse gas emissions, assessing vulnerabilities to climate change, and evaluating strategies for mitigating emissions and adapting to potential impacts; creating a process for developing and implementing climate change related policies and measures; preparing climate change action plans; promoting diffusion of mitigation and adaptation technologies; and developing information to further regional, national, and international discussions. Funded and staffed by multiple government agencies, the USCSP has assisted 56 countries in every region of the world. Since 1997, the USCSP has issued ten major reports or Special Journal articles documenting the results of these studies; forty-nine countries have completed their country studies; twelve countries have completed their national action plans (out of nineteen countries working on such plans); seven experts from developing countries have worked for 3-6 months with the USCSP in Washington as Visiting Analysts; and the USCSP has sponsored eight regional and global workshops to promote discussion and information sharing among countries preparing national action plans.

U.S. Initiative on Joint Implementation, USAID, USDA, USDOE, USEPA, and the Departments of Commerce, Interior, State and Treasury

Initiated in 1993 as part of the U.S. Climate Change Action Plan, the U.S. Initiative on Joint Implementation (USIJI) supports the development and implementation of voluntary projects between U.S. and non-U.S. partners that reduce, avoid, or sequester greenhouse gas emissions. Projects accepted into the USIJI program are evaluated against nine criteria and four other areas of consideration. As of March 2000, the USIJI program has accepted forty-one projects in nineteen countries.

Village Power 2000, USDOE

USDOE is supporting efforts to increase the availability of clean and affordable energy rural areas where there is currently no access to electric power. Village Power 2000 is a public private partnership working to mobilize resources from the U.S. government, bilateral, multilateral, and regional development banks, as well as the private sector and non-government organizations to identify and promote project opportunities, facilitate partnerships, and assist in overcoming technical, institutional, and financial barriers to the provision of energy services to rural populations. USDOE plans to hold a Village Power conference in Washington, D.C. in April 2000 to demonstrate the role of renewable energy technologies in facilitating social and economic development that is both sustainable and non-damaging to the environment.

AFRICA

Regional

Central Africa Regional Program for the Environment Workshop, USAID

USAID sponsored a Central Africa Regional Program for the Environment (CARPE) Workshop on Non-Wood Forest Products in Limbe, Cameroon. Proceedings, entitled, "Current Research Issues and Prospects for Conservation and Development" were published. The workshop served to evaluate and identify possible strategies to assess the potential role the development of non-timber forest products industry could serve in conservation and development initiative in Central Africa.

Climate Change Workshop for the Southern African Development Community, USAID

In September 1999, USAID organized this workshop in Botswana, a joint U.S. Country Studies/Climate Technology Initiative activity, aimed at countries of the Southern Africa Development Community (SADC). The purpose of the workshop was to provide advanced training in the country studies area, and to begin a regional technology needs assessment in the energy sector for the Climate Technology Implementation Project focused on SADC countries. The workshop was the first step in developing a successful clean energy technology transfer program for the SADC region.

Economics of Climate Change, USAID

In April 2000, approximately 35 policy and decision makers from government ministries for economy and treasury will travel to Senegal to participate in a one week regionally-focused training course. The course is designed to introduce economic policy makers to climate change and its potential impact on economies. It is structured to overview the connections between the economy and the environment, to look at the relative costs and benefits of strategies for reducing emissions and vulnerability to climate change, and to look at how countries can benefit economically from "climate friendly" development.

Economics of Climate Change, USAID

In March 2000, approximately 35 policy and decision makers from government ministries for economy and treasury will travel to Zimbabwe to participate in a one week regionally-focused training course. The course is designed to introduce economic policy makers to climate change and its potential impact on economies. It is structured to overview the connections between the economy and the environment, to look at the relative costs and benefits of strategies for reducing emissions and vulnerability to climate change, and to look at how countries can benefit economically from "climate friendly" development.

Harnessing Market Forces to Provide Energy and Reduce Potential Greenhouse Gases, USAID

USAID and the Regional Center for Southern Africa have developed a collaborative program with the Southern Africa Development Community and the Southern African Power Pool (SAPP) to promote efficient energy production and consumption. The program provides technical assistance designed to transform Southern African power markets through regional

cooperation and the establishment of a SAPP Coordination Center. As a result, regional integration efforts will be accelerated and electricity trade within the SAPP will be enhanced. This program also supports activities in other Sub-Saharan Africa regions to strengthen energy institutions and address legal, regulatory and policy issues.

Livestock Nutrition Improvement and Methane Reduction Project, USEPA
USEPA worked with local and U.S. non-governmental organizations and host governments in Uganda, Tanzania and Zimbabwe to examine local livestock feeding practices to determine the potential for improving livestock productivity and reducing emissions. A livestock methane measurement project has been established in Zimbabwe and is examining the effects of improving livestock nutrition on emissions and productivity.

Western Africa Regional Workshop on Greenhouse Gas Emission Inventories, Vulnerability and Adaptation Analysis Training, Senegal, USAID
In Spring 2000, approximately 50 participants from the countries of Western Africa involved in the development of national communications under the UN Framework Convention on Climate Change will participate in this one week workshop. Participants of the region will be trained in the revised IPCC Guidelines on Greenhouse Gas Inventories; exchange information and share experiences on countries' current or previous efforts to develop greenhouse gas emission inventories; be trained in the use of quantitative models for analyzing policies, programs, and measures for reducing greenhouse gas emissions, or increasing sinks, analyzing climate change scenarios and assessing sector vulnerability specifically for the agriculture and water resources sectors; exchange information and share experience on countries' current or previous efforts to identify and analyze greenhouse gas mitigation and adaptation possibilities specifically with regard to the agriculture and water resources sectors; and promote cooperation and coordination among participants and institutions involved in climate change analysis and policy development in Western Africa.

Workshop Addressing Financing and Capacity Building Projects, USEPA
USEPA is hosting a workshop with Environment and Development Research Center, University of Cape Town in Cape Town, South Africa. The workshop will address the challenges of securing financing and ensuring capacity building in a greenhouse gas reduction or sequestration project.

Egypt

Cairo Air Improvement Project, USAID
The purpose of the Cairo Air Improvement Project (CAIP) is to reduce emission of pollutants that have been shown to have the greatest health risks. The project is designed to: improve fuel efficiency and reduce exhaust emissions of the gasoline motor vehicle fleet by instituting a private sector-managed vehicle emissions testing, tune-up and certification program; reduce the total suspended particulate emissions from diesel-fueled buses by expanding the use of compressed natural gas fuel; reduce lead and particulate emissions by reducing the concentration of airborne lead in and near lead smelters; institute an air quality monitoring network and analysis of CAIP-related interventions; and initiate a public awareness and communications campaign related to the other components. Activities include technology demonstration,

feasibility and technical assistance, policy reform, human and institutional capacity building, and information dissemination. Principal partners include the Ministry of State for Environmental Affairs, Ministry of Petroleum, local governments, and several private sector firms.

Egyptian Environmental Policy Program, USAID, USEPA
This activity is supporting technical assistance and cash transfer components and addresses policy reforms and institutional capacity building throughout the environmental and natural resources arena, including energy efficiency issues related to climate change, biodiversity conservation and natural resource management in the Red Sea area, urban and industrial pollution such as solid waste management and pollution prevention, and strategic planning. Several policy areas are oriented towards fostering private and public sector partnerships. Principal partners include the Ministry of State for Environmental Affairs, Ministry of Tourism, Ministry of Petroleum, as well as local governments and independent sector institutions.

Power Sector Support Project , USAID
USAID supports accelerated private sector-led growth, and this project seeks to improve the policy environment to increase efficiency and sustainability. Specific activities include supporting the establishment of a regulatory commission that will rationalize the process of setting rates, and support for raising the rate of return on investment in the sector. Support is also provided for infrastructure development.

Ghana
Cooperation with Ghanaian Energy Foundation, USEPA
This project is designed to provide technical assistance to the Ghanaian Energy Foundation as it designs and implements a public education and information program on energy efficiency.

Industrial Efficiency Assessments Cooperation with Ghana, USDOE
USDOE has worked to establish a self-sustaining program in Ghana to perform assessments and implement measures to save energy, minimize waste, and increase productivity in the manufacturing sector. USDOE facilitated collaboration with the Ghanaian Ministry of Mines and Energy and the University of Science and Technology in Kumasi to adapt appropriate elements of the U.S. industrial efficiency program to local conditions. USDOE provided Ghanaian personnel technical assistance and training in several areas, including participating in assessments at U.S. manufacturing plants with U.S. university teams. USDOE also supported assessments and implementing measures designed to reduce energy costs. The Ghanaian team and Texas A&M University also conducted several assessments in country, including recommending several energy efficiency improvements at a plywood and veneer plant. USDOE also provided follow-up training through additional joint assessments and workshops. The Ghana Energy Efficiency Foundation supports these efforts by developing informational materials. USDOE's Lawrence Berkeley Laboratory is also helping the Foundation promote local energy efficiency codes, standards, and labels, and in addition USDOE's Oak Ridge National Laboratory is helping promote the establishment of local electric motor repair facilities.

Technical Support for Energy Services Companies, USDOE
USDOE is collaborating with the Ghanaian Ministry of Mines and Energy to provide technical support to help develop rural energy services companies to provide a range of energy services, including photovoltaic systems, to targeted regions.

Madagascar
National Park Basic Infrastructure Support, USAID
USAID and the U.S. Forest Service assisted in project planning and development, and helped to put in place the basic infrastructure (trails, bridges) for the newly created Masoala National Park.

South Africa
Electricity Policy Project, USDOE
USDOE is providing technical and analytic assistance to the Department of Minerals & Energy and the South African National Electricity Regulator on matters of electricity market structure and regulation and electrification issues. This effort is identifying several regulatory options, developing a pricing policy consistent with economic development goals, helping to organize a conference on Regulatory Cooperation in the Southern African Region, providing policy assistance on electrification program design, and helping with strategic planning for the South African National Electricity Regulator.

Energy Efficiency in South Africa, USEPA
Working with the Green Buildings for Africa and the Clean Commute programs, USEPA provides technical assistance designed to promote and support voluntary energy efficiency program development in South Africa.

Energy Efficiency Policy and Program Cooperation, USDOE
USDOE is collaborating with South Africa on the development of energy-efficiency policies and programs, focusing on developing a motor challenge program and energy standards for buildings.

Energy Efficient Housing, USAID
This USAID project is promoting energy efficient housing designs to increase savings in space heating and reduce carbon dioxide emissions. Currently being implemented in two communities, the aim is to develop a low-cost model for environmentally sound, energy efficient housing that can be incorporated into South Africa's ongoing housing delivery program.

Protected Area/Wildlife Management Training, USAID
USAID, in conjunction with the U.S. Forest Service, conducted a two week training course in wilderness management skills to park rangers and wardens. The overall objective was to develop skills necessary to enhance the overall viability and effectiveness of these protected areas in conserving biodiversity.

Renewable Energy Technology Cooperation, USDOE
USDOE is collaborating with the South African Department of Minerals and Energy and South African Regulators to provide technical support for the design and implementation of renewable energy technology programs, including photovoltaic systems.

Tanzania

Solar Energy and Economic Development Initiative for Tanzania, USDOE

USDOE is collaborating with the Northeast Sustainable Energy Association to support the development of a solar energy and economic development initiative for Tanzania.

Zimbabwe

Landfill Gas Utilization in Zimbabwe, USEPA

Project exploration would involve a feasibility study; project design, installation, and demonstration; and finally installation of the full recovery system for landfill gas use at a landfill facility in Harare. A landfill gas utilization project will partner with the Zimbabwe Ministries of Environment and Tourism, Energy & Transport, Lands and Agriculture, and the Harare City Council, and others. USEPA is currently in a discussion phase with the Center for Renewable Energy and Environmental Technology, which is spearheading this effort.

ASIA / PACIFIC

Regional

Asia Forestry and Climate Change Mitigation Project (FORCLIMIT), USEPA, the Department of State

The FORCLIMIT project will assess the potential implications of the United National Framework Convention on Climate Change and other potential agreements on the forestry sector in three countries – the Philippines, Malaysia and Indonesia. Project activities include: helping in-country analysts to improve their forestry (and possibly agriculture) sector greenhouse gas emissions inventory estimates; identifying and evaluating potential national policy and project-level sustainable forestry management options with climate change benefits; and introduction of forest project evaluation for risk, investment potential and credibility of performance over time. Work has been conducted in Indonesia, Thailand, Malaysia, South Korea, India, China and four other countries over the past eight years on climate change and forestry inventory and mitigation analyses. Training has been conducted for in-country experts to run the COPATH and COMAP computer models that were collectively built, and had published results. Several workshops are being developed to bring together analysts and potential forestry project developers to compare analyses and raise technical issues.

Asia Sustainable Energy Initiative, USAID

The Asia Sustainable Energy Initiative, a project of USAID, assisted member countries with their efforts at mitigating climate change impacts originating in the energy sector. Under the Initiative, the Institute of International Education organized technical training for professionals from India, Indonesia, and the Philippines. The training provided participants with a working knowledge of the full range of technical and institutional requirements necessary for the implementation of workable, results-oriented energy labeling programs adapted to their respective countries. The training examined the role of energy efficiency labeling in promoting the manufacture, marketing, and purchase of electrical equipment, such as refrigerators, residential air conditioners, lighting systems, and motors. As a result of this activity, it is

anticipated that product standards, testing, and labeling programs on electric equipment will be established and/or improved in the participating countries, with potentially significant impacts over the longer term for mitigating energy demand growth rates and reducing gross domestic product energy intensity.

Consultative Meeting on Market-based Instruments for Climate Change, USAID, Department of State, USEPA
This August 1999 meeting in Indonesia, organized by USAID, the State Department, and USEPA, in conjunction with the Government of Japan's Environment Agency, was aimed at improving the understanding of market-based instruments among key East Asian interlocutors and promoting a longer-term exchange of information on the market-based instruments.

Internet-Based Information Resource and Discussion Platform on Greenhouse Gas Reduction Strategies in Asia, USDOE
USDOE and the TATA Energy and Resources Institute are collaborating to build an Internet-based information resource and discussion platform on the issues of energy efficiency and renewable energy technologies.

Meeting on Developing Carbon Markets for the Confederation of Indian Industry (CII), USAID
This April 1999 special session in India created awareness among CII member industries on the potential opportunities for new financial flows and technology transfer through partnerships with U.S. industry in carbon trading.

Technical Manual, USAID
USAID and its forestry partners helped to finalize, publish and distribute a technical manual for agricultural extension workers dealing with the rehabilitation of grasslands using agroforestry and natural regeneration.

Training Video, USAID
USAID and its forestry partners provided project funds to support the production of a training video "Let Nature Take Its Course: Conservation Farming with Natural Vegetative Strips and Landcare in the Philippines." The video provided instructional guidelines in the use of conservation farming practices for agroforestry to minimize soil erosion on sloping lands.

US-AEP Environmental Exchange Program, USAID
US-AEP provides opportunities for professional exchanges between the U.S. and Asia on a wide array of topics promoting sustainable development in Asia. The program seeks to build and strengthen ties between U.S. and Asian entities to help Asian countries address environmental problems using ideas from U.S. technology and experience.

US-AEP Environmental Professional Association Development, USAID
US-AEP is supporting the formation of Asian national environmental professional membership associations in Thailand, Indonesia, Singapore, India, and the Philippines. US-AEP also

provides assistance with recruitment, training in association management, technical information on many environmental issues, and matching grants for local associations.

US-AEP Environmental Technology Fund II, USAID
The National Association of State Development Agencies manages a fund which provided matching grants to promote relationships between U.S. and Asian entities, in support of sustainable economic development and environmental improvements, including sustainable energy development.

US-AEP Improved Environmental Management in Asia, USAID
USAID provides Environmental Action Teams through the USEPA. Teams provide training, and short-term technical assistance designed to strengthen local, regional, and national environmental management practices in Asia.

US-AEP Non-Governmental Organization Business Partnerships, USAID
The Asia Foundation implements and manages an incentive grants program designed to strengthen links between Asian non-governmental organizations and businesses, fostering public-private partnerships that advocate or demonstrate environmentally responsible business practices.

US-AEP Promotion of Pollution Prevention and Clean Technology Concepts, Technology and Equipment, and Education in Asia, USAID
US-AEP fosters local expertise on pollution prevention and the efficient use of energy and resources.

US-AEP State Environmental Initiative, USAID
USAID supports this activity, which includes all 50 U.S. states, and involves helping state organizations identify and develop environmental projects in Asia, and providing grants to implement those projects.

US-AEP Technical Representatives, USAID
USAID supports technology representative offices in India, Thailand, Indonesia, the Philippines, South Korea, Taiwan, Hong Kong, Malaysia, Singapore, and Vietnam in order to promote cleaner, more efficient industrialization and urbanization in Asia. The technology representatives facilitate access to U.S. technology, expertise and partnerships to bring about clean, efficient development.

Bangladesh
Global Climate Change and Development Workshop, USAID
In November 1999, approximately 20 high-level developing country policy makers drawn from a wide range of ministries, the private sector and non-governmental organizations participated in this one-day seminar in Bangladesh. The course was structured to raise awareness of climate change, its potential links to sustainable development and economic growth, and was tailored to the emissions profile and vulnerabilities specific to Bangladesh.

Improving Nutrition of Dairy Cattle and Reducing Livestock Methane Emissions, USEPA
USEPA is assessing the feasibility and benefits of reducing methane emissions through improved livestock feeding methods. Pilot projects are underway in Bangladesh to promote the use of molasses - urea feed supplements to improve productivity and reduce emissions from dairy cattle. Projects are being managed by U.S. and local non-governmental organizations and local dairy cooperatives.

China
Biomass Collaboration, USDOE
USDOE provided technical assistance and collaborated with the Chinese Ministry of Agriculture and the Chinese Center for Renewable Energy Development to develop the first complete assessment of biomass and bioenergy potential for China. The assessment of indigenous technological and market potential was jointly prepared and published in a bilingual format for both countries and is expected to lead to collaborative market developments and joint ventures.

Coalbed Methane Initiative, USEPA
This project involves assessments and pilot projects for capturing abundant gas resources at Chinese mines, with concurrent mine safety, power production, and climate benefits. USEPA worked with the China Coal Information Institute and jointly sponsors the China Coalbed Methane Clearinghouse. The Clearinghouse has conducted a journal in Chinese and English, has hosted several domestic and international seminars, and has developed with USEPA an economic analysis model to identify profitable projects to reduce methane emissions. The State Administration of Coal Industry and USEPA have partnered to develop a two-year market data development project which has convened representatives from more than eight major Chinese coal companies and over 20 representatives of foreign companies to form the Business Advisory Committee. The Committee has initiated the pilot phase of the project at the JinCheng Coal Mine Administration in Shanxi Province and meetings between foreign companies and coal companies to discuss project potential at a number of selected Chinese mines.

Computable General Equilibrium Model, USEPA
USEPA and Harvard University have developed a China Computable General Equilibrium Model (CGE) and provided it to China's State Council. Analysts in China use the China CGE model to simulate the effects of environmental constraints on the energy sector, greenhouse gas emissions, and the Chinese economy. The Chinese Academy for Social Sciences is working with USEPA to improve the quality of data used in this model.

Creating Sustainable Waste Systems in China Through Improved Waste Management and Electric Vehicle and Hybrid Electric Vehicle Technology Development, USDOE
USDOE provided the Chinese Ministry of Science and Technology information on electric vehicle industry standards and technical reports on batteries, fuel cells, electric motors, testing methods, training, demonstration programs, and policies to promote electric vehicle usage and environmental protection. USDOE coordinated a visit by a Chinese scientist to U.S. small businesses engaged in electric vehicle drive train development. USDOE provided information in the areas of technology transfer; policies and programs to advance electric vehicle deployment; and promotion of environmental, health, and safety measures. USDOE efforts are focused on

setting up personnel exchanges with USDOE national laboratories, and encouraging participation of small technology companies that can make significant contributions to the Chinese electric vehicle program.

Demonstration Building Project in China, USDOE
USDOE and China's Ministry of Science and Technology undertook a feasibility study of an energy efficient, mid-sized office building demonstration project in downtown Beijing. U.S. national laboratory buildings experts worked with Chinese architectural and engineering experts to analyze the buildings' energy requirements and identify cost-effective energy-saving strategies for this building. The U.S. and Chinese experts teams explored standard efficiency upgrades (such as use of more energy efficient windows), renewable energy options, and whole-building and passive-solar design options. This analysis generated a greater understanding of the opportunities for various energy savings strategies in buildings in China. The U.S. and Chinese experts teams are working with U.S. private sector firms to refine these strategies.

Energy Efficient Buildings, USEPA
USEPA is assisting China in developing its institutional capacity to support programs to improve the energy efficiency of buildings. Initial activities focus on data collection and development, market analysis, and the identification of key market and institutional barriers to energy efficiency. The data developed will support Chinese efforts to seek international funding for expanded activities to promote energy efficiency in the buildings sector.

Energy Efficient Industrial Motor Systems in China, USDOE
As part of the International Motor Challenge program, USDOE and China are working to facilitate the development, commercialization and use of high-efficiency motors, motor speed controls, and other technologies and practices to improve motor system efficiency in China. A study on the Chinese motor market, funded by USDOE, was conducted by the American Council for an Energy-Efficient Economy with the Beijing Energy Conservation Institute and the Shanghai Electric Apparatus Institute. In addition, the U.S. team has provided data on U.S. motors programs and products to China and is helping U.S. motor manufacturers assess opportunities for joint ventures in China. Efforts are now focused on developing and conducting a Chinese Motor Challenge Program. As part of the activity, data is being exchanged on motor systems, including fans, compressors, and pump systems. A Motor Challenge workshop was held in Beijing in May, 1998 to introduce program concepts to Chinese policy makers.

Energy Efficient Office Building Demonstration Project in China, USDOE
USDOE and the Chinese Ministry of Science and Technology are collaborating on the demonstration of clean energy building technologies. Experts from USDOE's National Renewable Energy Laboratories and Lawrence Berkeley National Laboratory on solar and energy efficient buildings have met in Beijing with the Ministry of Science and Technology and the Chinese building design team to review preliminary plans for the building.

Integrated Gasification Combined Cycle Power Generation to Achieve Emissions Reductions, USEPA
USEPA is engaged in technical cooperation with China to lay the groundwork for construction of

Integrated Gasification Combined Cycle (IGCC) demonstration power plants. These plants use 1/3 less water and provide up to 23 percent in carbon dioxide reductions through efficiency gains as compared with conventional coal plants. The project also includes cost efficiency studies, research and identification of manufacturing capabilities in China, and workshops and training on IGCC technology and benefits.

Mobile Sources, USEPA
USEPA is developing policy and technical assistance in pursuit of the phase out of lead in gasoline and vehicle emissions controls, including components of public awareness.

Modeling National Economic Impacts of Climate Change Policy, USEPA
USEPA is supporting this joint effort with national experts in economic modeling and environmental policy to develop improved capacity for analysis of costs and other economic impacts of policies to limit greenhouse gas emissions.

Nationwide Air Quality Monitoring Network, USEPA
USEPA will provide support in two phases to develop an integrated nationwide air quality monitoring network which will extend to 47 cities. National and local level officials will receive training, and U.S. experts will provide on-the-ground advice in siting and calibrating equipment, data collection and analysis, and forecasting. The project will assist China in tracking and controlling pollution sources and in raising public awareness.

Small Photovoltaic/Wind Technology Applications for Rural and Remote Development in China, USDOE
USDOE and the Chinese Ministry of Agriculture sponsored a workshop to: provide information to U.S. and Chinese businesses on rural electrification opportunities and plans for China; provide a forum to facilitate networking of U.S. and Chinese company representatives; and develop a strategy for fostering U.S./Chinese joint venture and other business activity in rural and remote renewable energy electrification in China.

Technical Assistance for Energy-Efficient Lighting in China, USEPA
USEPA through USDOE's Lawrence Berkley National Laboratory provides training at China's State Bureau of Technical Supervision and the Beijing Energy Efficiency Center in the development of standards for energy-efficient lighting in China, and in test procedures to improve production in China of energy-efficient fluorescent lamps.

Technical Assistance to Improve the Energy Efficiency of Air Conditioners in China, USEPA
USEPA provides support to assess and promote market transformation efforts to increase the market penetration of energy-efficient air conditioners. Specific efforts in China include monitoring air conditioner energy use and operating patterns, development of efficiency standards, and addressing technical and market barriers to air conditioner efficiency improvements.

Transfer of Voluntary Programs , USEPA
USEPA is supporting work building case studies of industrial sectors (pharmaceuticals), using

the established energy pathways of the Taiwan MARKAL, and developing a waste materials pathway which can be run in parallel to the energy pathway.

U.S.-China Energy and Environment Technology Center, USEPA, USDOE
This center facilitates technical cooperation with China to disseminate information on energy and environmental technology related to electric power as well as information exchange, demonstrations, and research on energy and environmental technologies, such as clean coal, oil, and gas. USEPA and USDOE have partnered with Tulane University and China's State Science and Technology Commission.

U.S.-China Energy Efficiency Steering Committee, USDOE
The principal function of the Committee, co-chaired by the State Development Planning Commission and USDOE, is to coordinate government to government cooperative activities and to facilitate the interests of industry. The committee has activities in ten areas: buildings, cogeneration, district heating, electric motor systems, finance, industrial process controls, information exchange, lighting, policy, and transformers.

U.S.-China Partnership for Industrial Pollution Prevention, USEPA
USEPA is providing assistance under the U.S.-China Partnership for Industrial Pollution Prevention. This initiative will promote cleaner production and pollution prevention, and will focus on: sharing experience on applying public policy and regulatory approaches that encourage pollution prevention (source reduction); capacity building for technical and compliance assistance programs that promote pollution prevention and energy efficiency through government industry partnerships and "beyond compliance" incentive programs; information networking and exchange to improve access in China to U.S. technical materials, tools, and training resources.

India
Bagasse Cogeneration, USAID
USAID has done extensive work on opening the market for cogenerated power through policy studies that have led to breakthroughs in power purchase pricing in the key Indian sugar producing states, providing direct incentives to investments in cane cogeneration. USAID developed a program to bring together the sugar industry, utilities, and state governments to overcome existing barriers to grid-connected cogeneration. The Indian Ministry for Non-Conventional Energy Sources launched the National Program for Bagasse-based Cogeneration, supported in part by USAID, and government regulations and appropriate tariffs for cogenerated power have been established.

Electric Vehicles Program, USAID
USAID is sponsoring activities designed to leverage public and private investments in electric vehicles. A prime objective of the program is to reduce particulate matter and lead in the urban environment. This program has helped U.S. and Indian industry to explore business and partnership opportunities. USAID assistance helped Amerigon Inc., CA and Maini Group of Companies, Bangalore establish a joint venture company, REVA Electric Car Company, to manufacture passenger electric cars in India. Recently, USAID launched an India Zero Emissions Transportation (IZET) demonstration program for electric two and three wheelers in

collaboration with Bajaj Auto Ltd., Pune and New Generation motors, Virginia. The Tricon Restaurants (Pizza Hut, Delhi) and Welcome Group Hotels (Mughal Sheraton, Agra) are other partners in IZET for two and three wheelers respectively.

Energy Efficiency and Demand-Side Management, USAID

Energy efficiency and demand-side management (DSM) is a major area of USAID assistance and the program has focused on four areas, namely DSM in utilities, energy efficiency in water pumping, energy efficiency standards and labeling and policy support. Assistance was provided to Ahmedabad Electricity Company (AEC), a private sector utility to design a DSM program. A number of pilot DSM projects have been initiated by AEC in the industrial and residential sectors. Technical assistance on DSM was also provided to two other state utilities, those in Hayrana and Tamil Nadu. In Haryana, energy efficiency projects were developed and in Tamil Nadu, a load research program was conducted. USAID assistance also helped design the adoption of an energy efficiency label by the Bureau of Indian Standards. USAID also provides technical assistance to the ministry of power for development of policies to promote energy efficiency.

Greenhouse Gas Pollution Prevention Project, USAID

USAID is supporting the Greenhouse Gas Pollution Prevention Project in collaboration with the Industrial Development Bank of India and the National Thermal Power Corporation (NTPC) with funding from the U.S. Government contribution to the pilot phase of the Global Environment Facility. The project aims to reduce carbon dioxide emissions per unit of electric power generated by optimizing the efficiency of generation from existing thermal power plants and encouraging bagasse and biomass utilization for year-round cogeneration in selected utilities. USAID's technical assistance and training work has helped to establish the Center for Power Efficiency and Environment Protection as a national center for providing technical leadership and advice to the electric power sector. USAID's power plant efficiency demonstrations at four Indian power stations have resulted in NTPC investments in new environmental equipment, with the potential for saving millions annually in coal purchases, and generating huge reductions in greenhouse gas emissions. USAID's investment assistance to nine sugar mills will set up nearly 200 MW of bagasse (waste from sugar cane crushing) cogeneration units to supply of power to the grid based entirely on biomass fuels. USAID's technical assistance has, in part, helped develop a pipeline of further 200 MW sugar cogeneration facilities. This activity builds upon the previous work of USAID on policy studies for opening the market for cogenerated power. USAID policy studies have helped to Indian decisionmakers to establish government policy and appropriate tariffs for cogenerated power.

India Private Power Initiative, USAID

USAID supported hands-on technical assistance to State Electricity Boards and the Indian Government to build in-country capabilities to evaluate and process the numerous project proposals now pending before the Government, as well as assistance in the formulation of the project contract documentation necessary for international financing. The project works with the Ministry of Power to develop regulations, contract procedures, and guidelines for setting up private power companies. India Private Power Initiative staff also provides country-wide training on the fundamental aspects of private participation in the power sector. The project

supports U.S. developers to identify potential local joint venture partners. USAID has provided extensive technical assistance and has trained over 400 Indian professionals in the range of issues associated with the shift from state-owned utilities to private power generation which is expected to produce huge potential environmental benefits through increased operational efficiency.

Indo-Business Dialogue on the Clean Development Mechanism, USAID
In May 1999, Indian and U.S. industry leaders participated in a meeting to increase awareness of issues related to furthering U.S. and Indian partnerships on climate change mitigation, specifically regarding potential partnership under the Clean Development Mechanism.

National Thermal Power Corporation, USAID
USAID's work with the National Thermal Power Corporation (NTPC) has helped establish the Center for Power Efficiency and Environment Protection as the foremost center for providing technical leadership and advice to the electric power sector. USAID's power plant efficiency demonstrations with NTPC are expected to generate significant greenhouse gas reductions.

Power Sector Regulatory Reform and Restructuring, USAID
USAID is providing support for the establishment of a policy, regulatory and legal environment in the Indian power sector to create an enabling environment for enhanced private investment in the sector. Extensive technical support to several state electricity regulatory commissions and the Central Electricity Regulatory Commissions in staffing plans and in the establishment of rules and procedures, and tariff guidelines is supported by USAID, and USAID is also providing technical assistance for power sector policy.

Ramakrishna Mission Economic Photovoltaic Development Initiative, USDOE
USDOE has supported a sustainable rural electrification program cost shared with India's Ministry of Non-Conventional Energy Sources in collaboration with the Ramakrishna Mission, a humanitarian organization in West Bengal, India. USDOE provided training to Mission personnel who subsequently trained additional trainers. The Mission provides banking, installation, and maintenance functions for the project, and more than 300 systems were installed in seven villages in isolated areas. An additional two thousand systems have been sold in the area following the successful demonstration.

Renewable Energy Project Support Office (REPSO), USAID
USAID assists a number of non-government organizations in developing countries to promote the use of renewable energy by establishing Renewable Energy Project Support Offices (REPSOs). These in-country facilities are managed by local institutions and are designed to provide the technical and financial assistance necessary to help identify and evaluate renewable energy projects. The REPSO-India is based in New Delhi and is now a registered Indian not-for-profit organization. With USAID support, REPSOs provide technical and financial advisory services to set up commercialization models of renewable energy projects in India. One of the major successes of this program is accelerated commercialization of solar photovoltaic domestic lighting systems that REPSO-India supported Solar Electric Light Company established in southern Indian states. Another major achievement is the commercial sales of solar photovoltaic water pumping systems for irrigation by Polyene Film Industries, Chennai.

Sustainable Cities Initiative, USAID
USAID is supporting the first sustainable city in Ahmedabad, India. USAID and its partners worked closely with the city to build support for an energy management program at the local utility, hired a full time in-country coordinator to be a liaison, and introduced the concepts of lease financing and energy service companies. As a result of these efforts, the city government has established an official energy management cell and recently agreed to increase staff and funding for this new institution. USAID is currently funding the expansion of this activity in two other Indian cities, namely, Chennai in Tamil Nadu and Pune in Maharashtra. In Chennai, Alliance team is working with the state utility, the Tamil Nadu Electricity Board, to implement a demand-side management pilot project. In Pune, the team is working with the city municipality, the Pune Municipal Corporation, to launch a water pumping efficiency project. USAID and its partners are implementing a small technical assistance project to help the Vadodara Municipal Corporation in the city of Vadodara improve the pumping efficiency programs. USAID and its partners are examining the broader issues related to urban energy management, including: water management and conservation, institutional development, non-governmental organization development, and energy service company development.

Technical Assistance for a Demand Side Management Program, USAID
USAID provides technical assistance to Surat Electricity Company, a privately managed distribution company, to collect and analyze load data for its customers and to develop a demand-side management action plan to address peak load management and energy efficiency measures, as well as to develop publicity and educational material that educate customers on energy conservation.

U.S.-Indo Cooperation in Energy Efficiency, USDOE
The goal of this collaborative effort is to identify areas where there are opportunities for cooperative ventures in energy efficiency that will lead to economic and environmental benefits for both countries. Identified areas were: industrial process efficiency for the pulp and paper, mini-steel, and chlor-alkali industries; utility programs; motor challenge; cogeneration; transmission and distribution; energy-efficient labeling, standards, and testing; education and training; finance; and sustainable cities. Meetings and information exchange have been important initial steps in many of activity areas. The program was curtailed when the U.S. government imposed sanctions.

Utility Partnership Program, USAID
Funded by USAID, the U.S. Energy Association is implementing the Utility Partnership program in India. The program's main objective is to provide a mechanism for the U.S. energy industry to transfer its experience in market-based energy production, transmission, and distribution to its international counterparts, while providing U.S. utilities with opportunities to learn about the local energy industry. The partnership program has established eight partnerships in the country, three of which also complement USAID's regulatory reform activities.

Indonesia

Coordinated Local Environmental Action Networks/Energy Project, USAID

USAID's objectives in the Coordinated Local Environmental Action Networks Energy Project include technical assistance, financing, policy reform, institutional capacity-building, human capacity-building, information dissemination, and commercial facilitation. USAID's project aims to reduce the level of pollution and greenhouse gases emitted in power generation and transportation while meeting the need for reducing subsidies to state-owned enterprises, which is accomplished by providing institutional capacity-building to establish policy analysis capability and implement energy sector policy reform. USAID also provided technical assistance and capacity-building for restructuring Indonesia's state electric utility; technical assistance to develop integrated policy and an integrated program implementation plan for Clean Air in Jakarta; capacity-building of non-governmental organizations to promote financing of energy efficiency projects; and support for commercialization and financing of renewable energy.

Forestry and Terrestrial Protected Areas, USAID
USAID's Forest and Terrestrial Protected Areas program provides technical assistance, institutional capacity building, and policy reform. This program supports sustainable and decentralized management of forestry resources through improved technical practices and policy frameworks for industry; greater community and locally-based resource management; capacity building of private institutions for increasing awareness of environmental issues; and increased participation of women in natural resources planning and management.

Technical Assistance in Indonesia's Kayan Mentarang National Park, USAID
USAID and its forestry partners provided technical assistance in protected area management, in conjunction with the World Wildlife Fund Indonesia.

Training in Reduced Impact Harvesting, USAID
USAID and its forestry partners provided training in reduced impact harvesting practices, under a Memorandum of Understanding with the Indonesian Association of Concessionaires.

Water Efficiency Team (WET) Project, USAID
USAID and US-AEP developed a program to assist approximately 50 small municipal water enterprises throughout Indonesia. The WET project began in 1998, during the economic crisis when the quality and availability of water were threatened. Technical assistance is provided to assist water enterprises with financial difficulties to conduct technical and financial audits and develop plans to recover financially so as to continue to provide clean water to urban populations.

Wind-diesel Retrofits, USDOE
USDOE, through its National Renewable Energy Laboratory (NREL), assisted the World Bank by performing a market assessment of the potential to improve the efficiency of several thousand isolated diesel plants in Indonesia with enhanced controls or wind turbines. NREL identified several promising sites for pilot projects and a near to medium term potential of over 22 megawatts of wind power.

Windpower for Islands and Non-Governmental Development Project, USAID
USAID's project aims to introduce wind power technology in the eastern islands of Indonesia

and to involve local non-governmental organizations on these islands in providing local power needs, primarily through technology transfer. Since 1995, Windpower For Islands And Non-Governmental Development (WIND) has mapped wind power resources and installed wind monitoring equipment in ten locations, and has conducted studies to determine the feasibility of wind-based generation and transmission projects, including commercial possibilities. It has established wind power demonstration projects at 20 sites, and has developed the capacity of local non-governmental organizations and community members to establish and operate small, wind power generation and transmission facilities. WIND's overall objectives include technology demonstration, technology commercialization, institutional capacity-building.

Korea, Republic of

Greenhouse Gas Reduction Program, USEPA

This is a cooperative program to develop and implement in country greenhouse gas reductions programs. This proposed USEPA activity would bring together U.S. and Korean counterparts to choose three to five technologies and/or sectors in Korea which offer good opportunities for clean technology applications. These projects are funded by the USAID/US-AEP program.

Modeling National Economic Impacts of Climate Change Policy, USEPA

This joint effort with USEPA and Korean national experts in economic modeling and environmental policy will develop improved capacity for analysis of costs and other economic impacts of policies to limit greenhouse gas emissions, including analysis of the potential economic effects of market-based mechanisms.

Support Developing Country Constituencies for Climate Mitigation, USEPA

This project focuses on the compilation and dissemination of information regarding the environmental and economic strategies focused on energy efficiency and renewable energy.

Support for Economic Modeling, USEPA

USEPA is working through USDOE's Pacific Northwest National Laboratory (PNL) to support an expert cooperation process in Korea. PNL is working with the Korean Energy Economics Institute to convene a workshop of experts on economic modeling of climate policies in Seoul early in 2000. This workshop will initiate an ongoing program of technical cooperation between experts in the two countries.

Nepal

Forestry/Biodiversity Conservation, USAID

USAID's program supports increased sustainable production and sales of forest and high-value agricultural products. The program provides technical assistance, marketing and nutrition assistance to 500 production and marketing groups, through strengthened government capacity to provide extension services. It also supports natural resource legislation that expands community and private management of forest and water resources. More than 1,000 community forest user groups are managing communal forest areas.

Private Hydropower Development, USAID
USAID's program aims to increase private participation in hydropower development so as to promote U.S. investment in Nepal's energy sector and contribute to greater regional cooperation for water resource management.

Philippines
Buhay Greenhouse Gas Abatement Awards, USEPA
This project provides technical assistance to the Philippines for the design and implementation of an awards activity to recognize outstanding achievements in the reduction of greenhouse gas emissions.

Cities for Climate Protection, USAID
In coordination with the International Council for Local Environmental Initiatives (ICLEI), USAID is supporting a five-milestone process to reduce greenhouse gas emissions. To date, ICLEI has placed long-term advisors in the Philippines to facilitate this process. Six cities in the Philippines are participating in the program and have begun the process of establishing emissions inventories and identifying demonstration projects. Examples of potential projects include: promotion of methane gas capture from municipal landfills, improved traffic management, clean or renewable fuels for municipal vehicles, or energy-efficient street lighting. An important component of the ICLEI model is its focus on the development of specific emissions reduction projects.

Clean Coal Technology PASA, USAID
USAID is supporting a Clean Coal Technology Advisor who will work with the Philippine Department of Energy on clean coal technology, power sector restructuring, natural gas development, information systems, renewables, and energy planning and pricing.

Energy Efficiency Malls Program, USEPA
This program provides technology transfer regarding energy efficiency partnerships and development of a recognition of achievement awards program.

Environmental Peer Exchanges, USAID
This peer exchange program between USAID and the Philippines brings together Hawaii state energy officials with the Philippine Department of Energy to transfer Hawaiian expertise that could assist the Philippines in the use of energy-efficient technologies.

Global Climate Change and Development Workshop, USAID
In November 1999, approximately 20 high-level developing country policy makers drawn from a wide range of ministries, the private sector and non-governmental organizations participated in this one-day seminar in Philippines. The course was structured to raise awareness of climate change, its potential links to sustainable development and economic growth, and was tailored to the emissions profile and vulnerabilities specific to the Philippines.

Governor of Bukidnon Province Workshop, USAID, Department of State
The Governor of Bukidnon hosted a one-day workshop, supported by USAID and the

Department of State, which introduced the "Farmer-Led Landcare Approach" to agroforestry and soil conservation.

Green Malls Project, USAID
USAID has been providing technical and policy assistance to the Manila Electric Company (MERALCO) to design and launch a Green Buildings program. The International Institute for Energy Conservation and MERALCO have designed and launched a voluntary program with shopping malls, one of the largest consumers of energy in the city of Manila, to implement energy efficiency measures and investments.

Hawaii-Philippines Cooperation Project on Energy Efficiency and Renewable Energy, USDOE
USDOE and the State of Hawaii are cooperating with the Philippines to promote environmentally-sound energy efficiency and renewable energy policies and practices in the Philippines.

Industries for Climate Protection, USEPA, USDOE, USAID
Climate Wise is a joint USEPA/USDOE program designed to encourage industries to take advantage of the economic and environmental benefits associated with energy efficiency improvements and greenhouse gas emissions reductions. Over 400 U.S. companies have enrolled in this program, several of which have facilities or suppliers in the Philippines. In cooperation with USEPA, USAID will establish peer partnerships between U.S. participants in the Climate Wise program and, when possible, their industrial counterparts located in the same cities enrolled in the Cities for Climate Protection program.

Landfill Gas Utilization in Philippines, USEPA
USEPA has conducted feasibility studies at select landfills in the Philippines and identified candidates for project development. USEPA has been working with country representatives to select and facilitate a demonstration project at a landfill site.

Philippines Climate Change Mitigation Program, USAID
USAID collaborates with ten U.S. government agencies, 12 Philippine agencies, and several environment-sector non-governmental and private organizations in an effort to mitigate greenhouse gas emissions in the Philippines. Efforts focus on establishing a favorable policy and regulatory climate, increasing the availability of financing from public and private sector institutions, building capacity within host-country organizations, and transferring technologies.

Voluntary Program Pilot Project, USEPA
USEPA plans to conduct a pilot project to reduce greenhouse gas emissions through the use of voluntary energy efficiency and pollution prevention programs in the food processing industry. This effort is being funded by the USAID/US-AEP program. The program would work with key organizations in the Philippines to improve access to U.S. technical and policy information for cleaner production, including USEPA's "Envirosense" database and information cooperatives.

Small Island States

Small Island States Greening Initiative, USDOE

USDOE is collaborating with member nations of the Alliance of Small Island States to increase deployment of energy-efficient and renewable energy technologies in these nations. This initiative includes conducting outreach and information dissemination to government leaders, policy analysts, and energy officials of small island states building on prior experience in the region.

Thailand

Landfill Gas Utilization Demonstration Project in Thailand, USEPA

USEPA has worked with professors at Kasetsart University to help them assess and develop a landfill gas utilization project at The Kamphang Saen Landfill. Through this partnership, they are in the process of installing a three stage landfill gas project. The first stage involved installing a test well to measure gas quality and quantity. The second stage involves the installation of an 870KW pilot project, and the third stage is to produce 3MW of electricity that the university will purchase to power campus operations. USEPA has provided design, technical, and construction assistance, has helped educate country officials about the benefits of landfill gas utilization, and has helped the project partners secure funds from the Global Environment Facility. Installation of the second stage began February 2000, and is scheduled to end later in 2000.

EUROPE AND EURASIA

Regional

Baltics Program, USAID

USAID is supporting a regional effort to prepare a least-cost investment plan for the Baltic region and develop a regional power pool/Independent System Operator. USAID is helping to develop the capabilities of the new energy regulatory agencies in Lithuania and Latvia. The work with the Baltic States supports the U.S. Northeast Europe Initiative and links with USAID work in Northwest Russia with Finland and the European Bank for Reconstruction and Development on a power investment program for Northwest Russia.

Bilateral Workshop on U.S.-Russian Greenhouse Gas Emissions Trading, USAID

The July 1998 workshop in Russia addressed economic, legal, and institutional issues related to the design and implementation of a greenhouse gas emissions trading system. The workshop provided a binational overview of the technical, economic, and institutional context for greenhouse gas trading at the international and national levels. The workshop was funded by USAID, and organized by the Harvard Institute for International Development and the Russian Higher School of Economics.

Caucasus Program, USAID

In Georgia, USAID is working on power market development, regulatory reform, investment planning, and development of geothermal resources, International Finance Institution loan preparation, and privatization of electric distribution and generation companies. USAID is also

supporting efforts to create petroleum legislation, petroleum sector restructuring, gas restructuring and regulatory development, and pipeline issues. In addition, USAID's program in Georgia supports the promotion of private sector investment to establish energy service companies (ESCOs) and exchange information through partnerships with U.S. firms. In Armenia, USAID is focusing on power market development, investment planning on alternatives to nuclear power, regulatory reform, company commercialization and privatization, coal and oil resource assessment, ESCO development and hydro development projects. USAID's energy-efficient ESCO activity in Armenia promotes private sector investment in the establishment of ESCOs and exchange of information through partnerships with U.S. firms. USAID has supported the development of a local chapter of the U.S. Association of Energy Engineers.

Central Asian Republic Program, USAID
USAID is providing legal and regulatory assistance related to oil and gas development and transport in Kazakhstan, Turkmenistan, and Uzbekistan. The major emphasis has been on developing internationally acceptable petroleum laws and implementing regulations, including environmental health and safety regulations related to offshore work in the Caspian Sea. A parallel effort has focused on the development of institutional and personnel capability within the governments to oversee exploration, production and transportation activities. USAID is also supporting five Central Asian Republics in their efforts to develop a regional power pool and to implement the Protocol on Parallel Systems Operations. In addition, USAID is providing assistance to Kazakhstan in the development of its competitive power market and to Kyrgyzstan on regulatory development, tariff reform, privatization, and hydro optimization. USAID is developing a new Caspian Environmental Partnership Program to address environmental aspects of Caspian oil development and transportation through a variety of partnerships linking entities in the U.S. and the Central Asian Republics. The partnerships focus areas include oil spill response, environmental education, regulation, and information dissemination.

CENTREL Program, USAID
USAID is supporting the development of the new Polish Energy Regulatory Office and developing demand-side management programs with the distribution companies in Gliwice and Torun, focusing on municipal customers. USAID is also supporting CENTREL – the organization of utilities from Poland, Hungary, Czech Republic and Slovakia – in a regional program covering transmission planning and power pool, operation, environmental coordination, and regulatory aspects of power and interconnection agreements. In addition, USAID is implementing several energy efficiency demonstration projects involving performance contracting with municipalities in Poland and Hungary, and is helping the Slovak government with phasing out heating tariff subsidies.

CENTREL Regional Environmental Roundtable on Emissions Allowance Trading, USAID
This August 1998 roundtable in Poland was the last activity of a four year program of environmental activities initiated by the U.S. Energy Association Environmental Working Group, comprised of key utility environmental managers from utilities in Poland, Hungary, Czech Republic, and Slovakia. The Working Group is part of CENTREL, the organization of utilities from Poland, Hungary, Czech Republic, and Slovakia, the countries that operate the high-voltage transmission grid. The Working Group provides a forum for the utility

environmental managers to discuss issues of mutual regional concern. The roundtable was designed to serve as a vehicle to bring utility representatives together with policy makers from the Central and Eastern European countries. Specific objectives were to: develop a common understanding of market-based mechanisms for greenhouse gas emissions reductions; explore opportunities to reduce emissions through allowance trading; share information concerning environmental regulations and utility compliance plans within the CENTREL countries; and describe the U.S. domestic emissions trading system for SO_2 from the perspectives of the U.S. government, participating electric utilities, and allowance traders.

Ecolinks, USAID

The purpose of the Eurasian-American Partnerships for Environmentally Sustainable Economies, EcoLinks, is to promote market-based solutions to environmental problems in Central/Eastern Europe and the New Independent States, with emphasis on the urban and industrial sectors. The program will help create lasting, environmentally focused partnerships between local governments, private enterprises and associations in the region and in counterpart organizations in the U.S., and across borders within the region. The program will also facilitate trade and investment in environmental goods and services in conformity with the statutory and policy constraints on investment promotion, as well as provide environmental professionals in the region with information about environmental laws, policies and regulations, best practices, environmental technologies and management systems.

Economics of Climate Change, USAID

In October 1999, approximately 35 policy and decision-makers from Government ministries for economy and treasury participated in a one week regionally-focused training course in Kiev, Ukraine. The course was designed to introduce economic policy makers to climate change and its potential impact on economies. It was structured to overview the connections between the economy and the environment, and to look at the relative costs and benefits of strategies for reducing emissions and vulnerability to climate change. The objective was to look at how countries can benefit economically from "climate friendly" development.

Environmental Action Programme Support, USAID

Environmental Action Programme Support (EAPS) is a component of USAID's efforts to support the EAPS formulated at Lucerne, as well as a continuation of USAID's earlier related activities aimed at improving environmental management and economic development prospects in the Central and Eastern Europe and Newly Independent States regions. EAPS is designed primarily to provide technical assistance for environmental project identification, selection, development, and packaging for investment financing. In order to support indigenous sources of project financing, EAPS provided technical assistance to environmental funds in Poland, the Czech Republic, and Lithuania. The program has also assisted applicants to environmental funds to develop technically sound and financially viable projects. More than 100 emissions reductions projects, covering 20 municipalities, were supported in Poland. Work with 16 municipalities was completed in the Czech Republic. In Bulgaria, EAPS is providing ongoing assistance to the city of Stara Zagora to convert traditional boilers to natural gas. In Slovakia and Romania, work has focused on environmental, technical, and financial feasibility studies for polluting enterprises.

Environmental Information Systems And Networks Project, USAID
USAID created the Environmental Information Systems and Networks project to facilitate environmental information sharing among countries in the region. USAID ensures that lessons learned regarding solutions to environmental problems are shared in several areas: internally, externally, and regionally.

Environmental Training Project, USAID
The Environmental Training Project is one of the ways USAID develops environmental knowledge, skills, techniques, and expertise in Central and Eastern Europe. Administered by the Center for Nations in Transition at the Hubert Humphrey Institute of Public Affairs at the University of Minnesota, it addresses a wide range of environmental concerns in transition economies. The project provides environmental training to nearly 7,000 public and private sector participants in Bulgaria, the Czech Republic, Hungary, Poland, Romania, and Slovakia with in-country coordinators administering its activities. An independent Environmental Training Project organization was established in each country to sustain services once USAID funding is completed.

Industrial Waste Minimization Program, USAID
To support the reduction of industrial pollution in Central and Eastern Europe and the Newly Independent States, USAID supports the Industrial Waste Minimization Program of the World Environment Center. USAID has supported project activities in Bulgaria, Lithuania, Poland, Romania, Slovakia, Ukraine, the Czech Republic, Hungary, and Kazakhstan. The Program works towards low or no-cost modifications of industrial processes, enabling industries to use technologies that reduce the amount of pollutants produced during manufacturing. One particular focus is investments that simultaneously improve the environment, provide economic benefits, cut worker and public exposure to toxic compounds, and conserve natural resources through low and no-cost techniques.

Lviv Urban Water Project, USAID
USAID developed a project to assist the Lviv Vodokanal (LVK) management in the assessment, repair and upgrade of the city's water production and distribution system. USAID developed a plan to improve operations based on collecting fees from consumers and provided technical assistance to the LVK via an operations office established on-site.

Newly Independent States Environmental Economics and Policy, USAID
USAID is working with national policy makers in the Newly Independent States (NIS) to introduce market-based incentives for enhanced environmental performance and to integrate environmental considerations into economic reforms, industrial restructuring, and privatization efforts. Through a cooperative agreement with the Harvard Institute for International Development, USAID is supporting a team of policy advisors and a team of local specialists to provide advice to national policy makers in the NIS. Three Senior Environmental Policy Advisors supported Russia and two supported Kazakhstan.

Newly Independent States Industrial Waste Reduction Initiative, USAID
The World Environment Center has recently launched its industrial waste reduction programs in Kazakhstan, Uzbekistan, and Ukraine. The project assists plants in the adoption of low-cost or no-cost investments which lead to significant industrial waste and pollution reductions while simultaneously lowering operating costs through decreased resource inputs and lower environmental fees. The project contributes to the on-going economic restructuring process in the region by enhancing the economic viability of recently privatized firms.

Southern Tier Program, USAID
USAID helped develop an electricity law and power restructuring plan for Romania which was approved by the Romanian government. USAID is working closely with a team of experts from the World Bank, the European Bank for Reconstruction and Development, and the International Monetary Fund on an overall approach to reform the power sector in Bulgaria, including support for the Energy Law that was passed by the Bulgarian Parliament in 1999. In addition, USAID is supporting energy service company development and municipal energy efficiency programs in Romania and Bulgaria. The work in Romania includes a new municipal energy financing initiative within the Southeast Europe Cooperative Initiative framework, involving financing from the European Bank for Reconstruction and Development and private banks. USAID is supporting the government of Macedonia in developing an energy tariff methodology and National Energy Strategy.

Supporting the Transition to a Market Economy, USAID
USAID is supporting the transition to market economies in Eastern Europe and the Newly Independent States through the creation of a new energy efficiency services industry. More than 200 new energy service companies and consultants have grown out of USAID's program. To expand the local experts and consultants professional and business development, USAID has supported the development of 13 local chapters in nine countries of the U.S. Association of Energy Engineers in the region.

Regional Networks, USAID
Energy restructuring and privatization issues in Central and Eastern Europe and the Newly Independent States are being addressed not only by USAID-country specific activities, but also through regional networks that are necessary for the long-term sustainability of energy systems in the region. The activities are designed to expand regional and international energy trade and the integration of energy systems with Western Europe and international energy markets.

Russia and Ukraine: Emissions Trading and Joint Implementation Capacity Building, USDOE
USDOE recently launched an effort to facilitate the use of clean energy technologies that could potentially be financed through emissions trading and joint implementation projects in Russia and Ukraine. USDOE's Pacific Northwest National Laboratory is collaborating with in-country experts to develop increased in-country capacity for baseline determinations, monitoring, and verification.

Albania

Albania Private Forestry Development Project, USAID

USAID worked in partnership with the Government of Albania, local organizations and non-governmental organizations, to support the Albania Private Forestry Development Project, a five-year project designed to increase Albanian rural household incomes and to alleviate, and ultimately reverse, the degradation of Albania's forests.

Bulgaria

Bulgarian Energy Efficiency Demonstration Zone, USDOE

USDOE has worked closely with the Bulgarian Foundation for Energy Efficiency (EnEffect) to develop a plan for an energy efficiency demonstration zone that has received funding from the Global Environment Facility. The project combines the retrofit of a school, hospital, high-rise multi-family building, industrial plant, district heating system, and street lighting with training, monitoring, evaluation and other capacity building activities. USDOE also provided technical assistance to Bulgaria when EnEffect was established as a non-government organization promoting energy efficiency.

Estonia

U.S.-Central and East European Electricity Management Development Institute Emissions Allowance Trading Forum, USAID

This USAID sponsored forum in July 1999 that included sessions addressing: Development of Domestic Emissions Allowance Trading in the U.S. for SO_2; Emissions Trading in the Context of Regional Integration with Western Europe; and Proposed International Emissions Allowance Trading Programs. The U.S.-Central and East European Electricity Management Development Institute is a legacy mechanism comprised of the electric utilities in the region. The emissions allowance-trading forum was requested by utilities in Estonia (the host utility), Latvia, and Poland.

Kazakhstan

Coal Mine Methane Project, USEPA

USEPA is working with the Kazakhstan National Environment Center, Kazakh Coal Mines, International Financiers, and U.S. private developers to create a comprehensive coalbed methane project in the Karaganda Coal Basin. A consortium of private developers and USEPA have developed a working group to consider the technical and economic issues regarding effecting an international greenhouse emissions reduction exchange resulting from the proposed project In March 2000, USEPA will participate and advise a consortium of U.S. developers visiting Kazakhstan regarding the feasibility studies.

Economics of Climate Change, USAID

In September 1999, approximately 35 policy and decision makers from Government ministries for economy and treasury participated in a one week regionally-focused training course in Kazakhstan. The course was designed to introduce economic policy makers to climate change and its potential impact on economies. It was structured to overview the connections between

the economy and the environment, and look at the relative costs and benefits of strategies for reducing emissions and vulnerability to climate change. The objective was to look at how countries can benefit economically from "climate friendly" development.

Support to Refine Kazakhstan's Analyses, USAID

In Spring 1999, USAID assisted the Government of Kazakhstan with USDOE's Argonne National Lab's ENPEP energy modeling software, and sponsored a U.S. study tour on climate change and technical, economic and policy issues. Support was also provided to assist Kazakhstan in conducting economic analysis of various sectors.

Technical Seminar on Aspects of Greenhouse Gas Emissions, USAID

This February 1999 seminar provided technical support for Kazakhstan's efforts to consider a greenhouse gas emissions target, and addressed: measurement and analysis of greenhouse gas emissions growth; analysis of the energy sector in Kazakhstan; availability of economic data and the status of macroeconomic modeling in Kazakhstan; Western experience with modeling; and sinks and ancillary benefits of greenhouse gas mitigation.

Technical Seminar on Aspects of Greenhouse Gas Emissions, USAID

In July 1999, a follow-up seminar to the February 1999 seminar took place. At that time, discussions were held regarding Kazakhstan's efforts on greenhouse gas inventory development; macroeconomic forecasting; energy modeling of the economic growth scenarios; prospects for greenhouse gas mitigation through energy sector and end-use investments; and other issues associated with emissions targets.

Moldova

Power Sector Restructuring and Privatization in Moldova, USAID

USAID is assisting with the reform of the power sector and improved energy efficiency. Power reform assistance focuses on establishing a sound legal and regulatory framework, development of the electricity market and investment plan (including linkages to Romania), privatization of the distribution and combined heat and power plants. Energy efficiency assistance focuses on municipal buildings (hospitals and schools) and residential buildings and on the creation of the private sector capability to deliver energy efficiency services.

Poland

Building Greenhouse Gas Inventories, USEPA

USEPA, working with USDOE's Pacific Northwest National Laboratory, is supporting a project assisting Polish experts in preparing a portion of the national greenhouse gas inventory (i.e., an inventory of a certain gas or sector) to help build the country's long-term capacity for inventories. The structure of the project will be determined in consultation with Polish counterparts, and will be followed up by a regional workshop to share results. As part of this

project, USEPA is also supporting an economic analysis of greenhouse gas mitigation opportunities in Poland.

Coal Mine Methane Activities, USEPA

USEPA has worked with the Polish mining and governmental bodies to identify and encourage reductions of methane emissions from coal mines. Currently, USEPA is supporting private companies and the World Bank in development of a Global Environment Facility comprehensive project, which would be based on work USEPA has supported to promote enhanced gas recovery, power generation, and treatment of mine waste water with coal mine methane as the principal fuel. These projects are advancing as restructuring of the Polish coal sector makes market conditions more amenable for small energy developments.

Emissions Trading Work, USEPA

USEPA is working with the Polish government to build institutional capacity in the government on using emission trading programs to address air pollution problems. USEPA will focus on increasing awareness of the benefits of emissions trading, and encourage discussions on key technical issues associated with developing emissions trading programs. In addition, USEPA will explore potential obstacles to using emissions trading with Polish policy-makers, industry, non-governmental organizations and other stakeholders.

Romania

U.S.-Central and East European Electricity Management Development Institute Emissions Allowance Trading Forum, USAID

The September 1999 forum consisted of sessions addressing: development of domestic emissions allowance trading in the U.S. for SO_2, emissions trading in the context of regional integration with Western Europe, and proposed international emissions allowance trading programs.

Russian Federation

Center for Energy Efficiency, USEPA

The Center for Energy Efficiency (CENEf) has drafted and submitted to Russian energy authorities an alternative energy strategy, and has facilitated contacts between Western business and Russian energy companies. USEPA contributed funding toward the establishment of the CENEf, headquartered in Moscow. CENEf, in its role as an energy think tank, has been active in promoting the concept of energy efficiency in Russia. It has drafted and submitted to Russian energy authorities an alternative energy strategy for Russia, as well as promoted demonstrations of energy-saving technologies and techniques, and facilitated contacts between Western business and Russian energy companies.

Collaboration on Renewable Energy, USDOE

USDOE and the Russian Ministry of Fuel and Energy launched a joint program for technical collaboration on renewable energy resources. Several demonstrations include: small wind

turbine and rooftop photovoltaic power generators for demonstration projects in Fili Park in Moscow, wind/diesel hybrid systems in 21 sites in Russia's Northern Territories, and assistance in the start-up operation of a photovoltaic panel manufacturing facility in Moscow using U.S. technology. USDOE economic feasibility analysis of a 470KW wood-waste biomass electric power plant laid helped the project secure a World Bank loan to build the facility. In addition, the Intersolarcenter in Moscow has been established as a sister organization to USDOE's National Renewable Energy Laboratory for joint research and development activities.

District Heating Initiative, USDOE

USDOE supported the Russian Center for Energy Efficiency and municipal efforts to identify, design, and finance district heating retrofits, resulting in significant efficiency improvements, largely funded by participating cities.

Energy Efficient Windows Program, USDOE

USDOE, in cooperation with U.S. window manufacturers, disseminated energy efficient window technologies and window rating systems to Russia. Two workshops were held in Moscow where U.S. and Russian window manufacturers developed plans for joint activities. As a result, the Russian Ministry of Construction (Gosstroi) has issued new, higher energy efficiency requirements for Russian windows.

Fire Management Manuals, USAID

USAID and its partners produced and distributed fire management manuals (written/translated into Russian). Topics included in the manual are: fire behavior, wildland fire tactics, water handling, fire engine use, bulldozer use, fire in the wildland/urban interface, fatigue and the firefighter, and fitness to work. The manuals formed a core component to U.S. Forest Service training courses conducted in Khabarovsk and Primorski.

GAZPROM Working Group, USEPA

This working group aims to identify and assess project opportunities to reduce methane emissions from Russia's natural gas system through the application of U.S. technologies. Through this effort, measurement of leaks in the GAZPROM pipeline system has been completed.

Integrated Resource Planning, USEPA

Project achievements include the preparation of an investment package for Mosenergo in the Moscow region. Also included is the development of energy regulatory bodies, consumer education about energy efficiency, and preparations for the development of an integrated resource plan in the North Caucasus (the Rostov, Krasnodar, and Stavropol energos).

Nizhnii Tagil Industrial Environmental Management, USAID

The project assisted in environmentally sound industrial conversion by identifying low or no-cost production line changes that increase economic efficiency and reduce pollution. Lessons learned are being applied to other communities that must balance environmental concerns with

employment considerations. USAID provided support to Russian non-governmental organizations, research institutes, and other organizations to participate in various aspects of the work.

Novgorod Oblast Inventory Project, USEPA, USDOE
USEPA and USDOE's Pacific Northwest National Laboratory are providing technical assistance to the Russian Federation to develop a greenhouse gas inventories at the oblast level. The Russian inventory team will also develop inventory guidelines for other oblasts and conduct a workshop on the results of the analysis (with other oblasts and Newly Independent States inventory specialists).

Novokuznetsk Multiple Pollution Sources Management, USAID
Through a cooperative agreement with the City Administration and other counterparts, this project improved drinking water quality and reduced air pollution in the context of economic restructuring and sustainability. Project activities included energy efficiency audits at five boiler facilities as well as a clean coal demonstration to document energy efficiency and pollution reduction effects. The project demonstrated a 20-25% higher combustion efficiency and a 60-80% reduction in particulate emissions when using higher quality coal in district heating boilers. Further audits found that minimal investments in sensors and process controls can achieve major reductions in energy use, operating expenses and air emissions in the hundreds of district heating boilers in the city. U.S. advisors also trained city air pollution personnel in techniques for establishing an air emissions inventory system, monitoring air quality, and identifying noncompliance with local standards.

Pilot Project On Pollutant Trade, USEPA
USEPA is working with the International Institute for Energy Conservation to develop a small pilot project on pollutant trade in Russia. The task involves training a group of Russians to run a non-greenhouse gas emissions trading project within a sector or industry. The focus is on developing capacity for a trading system within the Russian context and identifying potential institutional barriers to trading.

Power Sector Reform Initiative, USAID
USAID is supporting reform of the power sector in Russia through utility partnerships between U.S. and Russian electric utilities. The focus of the program is on promoting best practices for commercial operation at two regional energos.

Recovery of Fugitive Coalbed Methane Emissions, USEPA
USEPA, working with Partners in Economic Reform and the Institute of Coal and Coal Chemistry (Russian Academy of Sciences, Siberian Branch), founded the Russia Coalbed Methane Center in 1995. The Center has been active in catalyzing interest in developing the significant coal mine gas resources of the Kuzbass Coal Basin of Western Siberia. The Center has published a journal in Russian and English, hosted technical seminars, and has prepared feasibility analyses of coal mine methane projects. In addition, the Center has hosted foreign businesses interested in investing in coal mine gas projects and performed emissions estimates for coal mine gas in Russia. Currently, the Center is developing a laboratory to develop good

measurements of the gas properties of Kuzbass Coals and is collaborating with USEPA in preparation for the 2nd International Methane Mitigation Conference, to be held in Novosibirsk, Russia, in June 2000.

Russia/Khabarovsk Demonstration Plots, Russia, USAID
USAID and its partners helped to install research and demonstration plots that will ultimately help in training Russian counterparts in reforestation planning and monitoring techniques.

Russian Air Management Program, USEPA
The Russian Air Management Program is designed to demonstrate how improved institutions, policies, and practices in air-quality management can help solve air pollution problems in Russian cities. This program also aims to identify activities that will reduce greenhouse gas emissions.

Russian Far East Sustainable Natural Resources Management, USAID
USAID's Russian Far East Sustainable Natural Resources Management and Biodiversity Protection Program consists of a three year integrated environmental program. The twin aims of the program are to promote sustainable forest management and environmentally sound forest-related enterprises, and to enhance the protection of habitats for endangered species and areas of high biodiversity.

Technical Assistance in Greenhouse Design, Russia, USAID
USAID provided technical assistance for improved design and management for forest-seedling production.

Wind-Diesel Hybrid Power Systems, USDOE
USDOE's National Renewable Energy Laboratory (NREL) provided technical assistance to demonstrate the potential for wind technologies in off-grid locations in Russia's Northern Territories. NREL is collaborating with the Intersolar center in Moscow and the Northern regional governments, with financial support from USAID and the Initiative for Proliferation Prevention. Forty wind-diesel hybrid systems were installed in 21 sites in Russia's Northern Territories in 1997-98. The project also includes training and monitoring components.

Slovakia

Emissions Trading Work, USEPA

USEPA is working with the Slovakian Ministry of the Environment on designing a domestic cap and trade program for carbon dioxide. The project shares U.S. emissions trading expertise with Slovakian counterparts and assists Slovakia in building capacity to design and operate domestic emissions trading programs. Key issues to be analyzed include: points of allocation of allowances; monitoring, reporting and verification requirements; enforcement mechanisms; and administrative and legal requirements. As part of this project, USEPA is conducting a five-day emissions trading training course for participating officials from Slovakia and representatives from other interested countries.

Ukraine

Capacity Building for Climate Change Related Projects, USEPA

USEPA is working to develop institutional capacity for climate change related projects in Ukraine. This project involves capacity-building at the local level, i.e., identifying appropriate experts, potential projects, and candidate sites in Ukraine. To date, one workshop has been held in Donetsk in eastern Ukraine, and a second will be held in Lviv in the spring of 2000.

Coal Mine Methane Reduction Initiative, USAID, USEPA

In cooperation with the Government of Ukraine and USAID, USEPA is supporting work of the Alternative Fuels Center to reduce methane emissions from Ukrainian coal mines. Specific activities include developing profiles of promising sites for coal mine methane projects and inventories of methane emissions from Ukrainian coal mines.

Energy Service Company Support, USDOE

USDOE has recently begun working with the European Bank for Reconstruction and Development to define projects for UkrEsco, a newly established Ukrainian energy service company. USDOE's Pacific Northwest National Laboratory will provide technical assistance to identify and develop energy efficiency projects with potential economic benefits.

Industrial Energy Efficiency Financing Project, USDOE

USDOE supported Ukrainian firms in meeting the competitiveness requirements of economic reforms by improving their energy productivity. Six large factories approved a comprehensive package of recommendations, including installation of 30-45 megawatts of cogeneration capacity in one facility, and a multimillion dollar furnace in another. These two facilities will save a combined equivalent of 35-65 MW in capacity or up to $19 million per year when implemented.

Livestock Methane Project, USEPA

USEPA has provided training for Ukrainian scientists in a methane measurement technique that will be used to study livestock emissions from two large regions of the country. The data generated will improve the accuracy of Ukraine's inventory of agricultural greenhouse gas emissions, and will also help to understand the effects of using country-specific feed supplements on methane emissions and livestock productivity. Special feed supplements are provided to cattle that have been exposed to radiation in the Chernobyl area.

National Environmental Action Plan Work Groups, USAID

The work group program provides technical assistance, advice, and transfer of U.S. experience on topics of special importance to the implementation of Ukraine's National Environmental Action Plan. The work groups are comprised of Ukrainian decision makers with interests in environmental management issues.

Natural Gas Pipeline Efficiency Project, USDOE

USDOE is working closely with the Ukrainian State Committee on Oil and Gas and

UkrNaftohaz, the gas transit company, to study the feasibility of modernization and replacement of gas turbine compressor stations.

Private Sector Energy Efficiency Initiative, USDOE
USDOE is providing technical assistance for the design, development, and financing of energy-efficiency projects, and a demonstration project has been implemented in selected schools in Kiev.

Ukraine Biodiversity Conservation Assistance Activity, USAID
USAID is supporting the Ukraine Biodiversity Conservation Assistance Activity, which is administered by the Biodiversity Support Program, a Washington-based consortium of non-governmental organizations. The Program works to conserve biological diversity through support of innovative projects that integrate conservation and development and that work toward information exchange and outreach.

Ukraine Program, USAID, USDOE
USAID's major emphasis in Ukraine is in supporting the development of a financially-viable, competitive power market including regulatory development, privatization, and business training for the electric sector, starting with distribution companies. The electricity regulatory work is being expanded to include natural gas and petroleum products. USAID, in cooperation with USDOE, is financing industrial energy efficiency demonstration projects, municipal energy efficiency activities, energy service company development, investment promotion and IFI loan preparation activities in the Ukraine. The U.S.-Ukrainian Council on Sustainable Development has established an energy efficiency working group that coordinates these activities. USAID is also working on policy and regulatory issues affecting the development and investment in coal bed methane. USAID also financed a USDOE effort for the development of a model production-sharing law.

Ukrainian-U.S. Conference on Global Climate Change and Greenhouse Gas Mitigation Through Emission Trading and Joint Implementation Projects, USAID
This October 1998 conference was sponsored by USAID and nine Ukrainian government organizations, and was funded by USAID and organized by the US Energy Agency. The objectives were to: initiate discussions between Ukrainian and U.S. officials on matters related to the UN Framework Convention on Climate Change; identify obstacles to, and requirements for, the Government of Ukraine to participate in international climate change activities; discuss how Ukraine can benefit economically and environmentally from mitigating greenhouse gas emissions; and examine mechanisms for Ukraine-U.S. collaboration on greenhouse gas mitigation.

U.S.-Ukraine Subgroup on Climate Change, First Session, USAID
The Subgroup on Climate Change was organized under the auspices of the U.S.-Ukraine Binational Commission. The Subgroup was established to provide a forum for bilateral dialogue on climate change policy and to foster the coordination of joint activities related to climate change. The May 1999 meeting addressed Ukraine's current activities and plans, the status of international negotiations on climate change, Ukrainian sectoral analysis, potential joint activities

and cooperation with other parties, mechanisms for administering and managing global climate change programs in Ukraine, and public involvement.

U.S.-Ukraine Subgroup on Climate Change, Second Session, USAID
The July 1999 meeting addressed: administrative structure for Ukraine's climate change programs; Ukrainian development of a national strategy and the national systems needed for implementation, such as monitoring, evaluation, reporting, and verification; exchange of information about technologies relevant to climate change and U.S. experience in designing and administering domestic market-based programs; training needs for Ukrainian officials; priority sectors for Ukrainian greenhouse gas mitigation activities and methods to attract private sector investors; development of the policy, legislative and regulatory framework needed to implement global climate change programs; cooperation with other countries and organizations; and participation in international negotiations and meetings.

LATIN AMERICA

Regional

Assisting the Caribbean in Developing Regional Baselines for Renewable Energy and Energy Efficiency Programs, USDOE
USDOE is providing technical assistance to Caribbean nations to increase energy efficiency and renewable energy technology diffusion. USDOE is also providing technical assistance on developing regional baselines for greenhouse gas emissions that can be used as the basis for developing energy efficiency and renewable energy projects under the UN Framework Convention on Climate Change.

Central American Building Efficiency, USAID
USAID will work with publicly managed buildings and municipalities in Central America to reduce energy operating costs. This activity will be coordinated with urban programs assisting municipal managers in identifying and implementing energy efficiency measures in buildings and public services, and will include private-public sector performance contracting.

Central American Regional Workshop on Greenhouse Gas Inventories, USAID, USCSP
USAID is assisting countries in the region to prepare national inventories of their anthropogenic emissions of greenhouse gases, and the development of initial national communications. This March 1999 conference in Guatemala, sponsored by USAID and the U.S. Country Studies Program, brought together U.S. and Central American analysts to present and compare the results of their respective assessments. The objectives of the workshop were to: train participants from the region in the revised IPCC Guidelines on Greenhouse Gas Inventories; exchange information and share experience on countries' current or previous efforts to develop greenhouse gas emission inventories; and to promote cooperation and coordination among participants and institutions involved in climate change analysis and policy development in Central America.

CONCAUSA, USAID, USDOE, USEPA

Nearly all of USAID's energy-sector assistance in Central America since 1995 has focused on programs intended to implement the goals of Conjunto Centro America y USA (CONCAUSA). USAID, USDOE and USEPA have funded programs under the auspices of CONCAUSA, including workshops in Guatemala, Honduras and El Salvador on policy and regulatory reform, and a regional training course on the management of transmission and distribution systems. USAID has also funded an analysis of the issues in power sector restructuring in Central America. The Environmental Enterprises Assistance Fund (EEAF), a non-profit investment company, was also established under CONCAUSA. EEAF focuses on environmentally progressive businesses and projects and provides both equity financing and loans, typically as part of a consortium of investors. EEAF set up an affiliate in San Jose, Costa Rica, Empresas Ambientales de Centro America (EACA) to identify investment opportunities throughout Central America. In March 1996 an agreement was approved between EEAF, EACA, and the Multilateral Investment Fund to create a $10 million environmental investment fund for Central America. This fund, the Corporacion Financiera Ambiental, invests in environmental businesses (including those involved in renewable energy and energy efficiency) in Guatemala, Belize, El Salvador, Nicaragua, Honduras, Costa Rica, and Panama. Focusing on small and medium-sized businesses, the fund will be managed by EEAF and EACA, with operating expenses supported by USAID. USAID also provided funding for the creation of the Fundación Solar, a local Guatemalan non-governmental organization managed by experts in rural electrification. Fundación goals include: establishing an information clearinghouse for Guatemala and neighboring countries, developing workshops on selected topics, providing technical assistance to the private and public sectors, and providing partial funding of pre-investment studies for site-specific projects. The Fundación assisted with the introduction of solar (photovoltaic) home systems in rural villages of Guatemala and in additional use of solar energy for village water-pumping installations, schools, and health clinics.

Economics of Climate Change Workshop, USAID

In November 1999, approximately 35 policy and decision makers from government ministries for economy and treasury participated in a one week regionally-focused training course. The course was designed to introduce economic policy makers in Ecuador to climate change and its potential impact on economies. It was structured to overview the connections between the economy and the environment, and look at the relative costs and benefits of strategies for reducing emissions and vulnerability to climate change. The objective was to look at how countries can benefit economically from "climate friendly" development.

Hemispheric Standards, USAID, USDOE

The Hemispheric Initiative focuses on promoting the development of national and regional standards for energy efficiency, especially in domestic appliances. The program receives funding from USDOE, and is implemented jointly with other partners and coordinated with the Latin American Organization for Energy Development.

Implementing JI/AIJ: A guide for Establishing Joint Implementation Programs, USAID

With technical guidance from USAID, the Center for Sustainable Development in the Americas wrote the first version of this manual on joint implementation (JI), which has served as a

reference tool for eight Latin American countries with over 400 Spanish-language copies distributed in the region. The revised manual, to be distributed in 2000, will include: current institutional information and descriptions of country experiences/lessons learned in the process of establishing programs; updated country and contact information; a list of Activities Implemented Jointly (AIJ) projects submitted to the UN Framework Convention on Climate Change (UNFCCC); descriptions of commonly used carbon quantification and monitoring methodologies; guidance on certification bodies determined by the UNFCCC Conference of the Parties; and an expanded glossary of terms and an analysis of institutional and methodological decisions taken by the UNFCCC Conference of the Parties. USDOE's Lawrence Berkeley National Laboratory will write a chapter for the manual on the use of an integrated environmental and economic analysis software to serve as a tool for training international experts involved in developing AIJ, JI, and Clean Development Mechanism projects.

Inter-American Development Bank Support: Sustainable Markets for Sustainable Energy, USAID, USDOE
USAID and USDOE have supported the Inter-American Development Bank's (IADB) Sustainable Markets for Sustainable Energy Program. The goal of the Program is to catalyze long-term sustainable markets for energy efficiency, renewable energy, and sustainable urban transport in Latin America and the Caribbean, and was initiated by the IADB in part to address rising carbon emissions in the region. The program's initial focus was the development of model projects to foster sustainable markets, which can then be replicated throughout the region. In its first phase of operations, the program developed six model projects in five countries (Argentina, Brazil, Ecuador, El Salvador, and Peru) focusing on energy efficiency, rural renewables, and urban transportation.

International Motor Challenge Program, USDOE
USDOE is partnering with Latin American countries to build on the U.S. experience and implement country specific programs to help local manufacturers reduce energy costs and increase productivity through improved industrial motor systems.

Latin America Heavy and Medium Duty Technology Initiative, USDOE
USDOE is providing technical and financial assistance to the Laredo Clean Cities Coalition to develop markets for alternative fuel and energy efficient technologies for heavy and medium duty transportation sectors in Latin America. The Coalition supports a program of on-going dialogue, outreach efforts, data collection, training and technical assistance, technology transfer and application of technologies. These technologies promote and develop markets for alternative fuel and energy efficiency for heavy and medium duty transportation sectors in Latin America.

Latin American Initiative for Environmental Technology, USAID
USAID supports this initiative to help increase private-sector investment in the development of environmentally sustainable energy services in developing countries.

Mesoamerica IUCN Community Involvement in Forest Management Publication, USAID
USAID and its partners published, "Mesoamerica IUCN Community Involvement in Forest

Management." This publication includes the results of case studies in the Mesoamerica experience in community involvement in forest management.

Modeling National Economic Impacts of Climate Change Policy, USEPA
Working cooperatively with national experts in economic modeling and environmental policy, this project will aid in the analysis of costs and other economic impacts of policies that limit greenhouse gas emissions, including an analysis of the economic effects of market-based mechanisms. This activity includes joint efforts with four countries: Argentina, Brazil, Chile and Mexico.

Post-Hurricane Mitch Infrastructure Rebuilding in Central America, USAID, USDOE
USAID, USDOE, and USDOE's Sandia National Laboratories to initiate programs throughout Central America focused on the sustainable use of renewable energy technologies as part of infrastructure rebuilding efforts in the wake of Hurricane Mitch. U.S. and Mexican organizations are coordinating their efforts to institutionalize the use of renewable energy technologies as countries address their rural infrastructure development goals. This effort includes providing technical assistance, training, and assistance in the implementation of pilot projects. Significant emphasis is placed on building partnerships between Mexican and U.S. industry to strengthen local renewable energy supply capabilities, by helping local vendors improve their system design, installation, and follow-on maintenance skills, and also improving their access to technically viable equipment.

Regional Renewable Energy Planning Model, USDOE
USDOE is collaborating with the National Rural Electric Cooperative Association-South America to develop computer-based analytic tools which allow for renewable energy systems to be considered in lieu of conventional grid extension or diesel generators. The model will make comparisons between individual renewable energy systems, isolated mini-grids (diesel or hybrid-renewable), and traditional central grid extensions for particular villages; and identify the potential benefits of various options.

Renewable Energy for Chile and Argentina, USDOE
In this project, USDOE is demonstrating renewable-energy technologies, project models and financial tools for delivery of clean power in remote areas in Chile and Argentina.

Technical Assistance to Facilitate Greater Use of Renewable Energy Technologies, USDOE
USDOE is collaborating with its National Renewable Energy Laboratory and the governments of Argentina, Brazil, and Chile to facilitate greater use of renewable energy in these countries. Activities include demonstrating commercially viable wind, photovoltaic, and hybrid technologies that are appropriate for local conditions; as well as establishing institutional, individual and business partnerships necessary to implement sustainable programs and commitments. USDOE is also providing technical assistance for large scale rural electrification, and training and capacity building for installing and maintaining systems.

Argentina

Modeling National Economic Impacts of Climate Change Policy, USDOE, USEPA

This joint effort with national experts in economic modeling and environmental policy will improve capacity for an analysis of the costs and other economic impacts of policies to limit greenhouse gas emissions.

Support for Study on Impacts, USEPA

USEPA is providing support for a study of climate change impacts in Argentina. Argentine researchers will develop a plan to build on prior work to generate a quantitative and integrated assessment of potential effects of climate change on important environmental, social, and economic sectors of Argentina.

Support for Technical Studies, USEPA

USEPA funded a cooperative agreement to support the Argentine Secretary of Natural Resources' technical studies on greenhouse gas inventories, emission projections, economic analysis, mitigation scenarios, and revision of the first Argentine National Communication.

Bolivia

Dry-tropical Siviculture Training, Bolivia, USAID

As part of the Bolivia Sustainable Forestry Management Project, USAID provided technical assistance in dry-tropical silviculture.

Fire Suppression and Management Training, Bolivia, USAID

As part of the Bolivia Sustainable Forestry Management Project, USAID provided funding to technical experts to evaluate fire training needs and to plan for subsequent training.

Brazil

Adaptation of the North American Energy Measurement and Verification Protocol to Brazil, USAID, USDOE

USDOE supported the development of a standard protocol called the North American Energy Measurement and Verification Protocol (NEMVP). USAID is currently working to adapt this protocol to a Brazilian context for the purpose of creating credible business and contractual instruments as well as channels for financing energy efficiency performance contracting. USAID has translated NEMVP into Portuguese and has presented it at a series of energy service company workshops. A working group will continue the dialogue on the adaptation and adoption of the NEMVP and will issue a first protocol within six months of the workshop.

Assistance in Establishing Efficiency Standards, USAID

USAID is working in Brazil to conduct studies on the potential for and design of appliance efficiency standards. USAID also assists Brazilian energy decisionmakers in developing strategies to advance energy codes in buildings and energy efficiency measures in the transportation sector.

Biodiversity Conservation and Sustainable Forest Management , USAID
This USAID program focuses on global issues of biodiversity conservation and sustainable forest management through its projects in conservation management, reduced-impact forest management, and agroforestry development for small producers, fire science and management activities, and environmental training and education. USAID participated in the G-7 Pilot Program to Conserve the Brazilian Rain Forest and also supports teams of Brazilian scientists (based at Amazonian research centers, universities, and non-governmental organizations) to address relevant natural resource issues. Goals of the program include a generation of knowledge to understand the structure and function of Amazonian ecosystems and the effects of human actions on ecosystem processes, and a generation of science and technological knowledge applied to the sustainable use of such ecosystems, including the considerations of economic, social, cultural, and ethnic bases for sustainable use.

Brazil Energy Training Program, USAID
As part of a comprehensive energy training program, USAID is building capacity among Brazilian energy professionals and high-level decision makers in key aspects of private power, efficiency, and renewable energy. USAID is implementing a Brazil Energy Training Program, and completed a draft training needs assessment for the Brazilian power sector. That assessment is being used to prioritize training in resource assessment, renewable energy systems design and installation, integrated resources planning, demand-side management, efficiency standards development, power sector pricing, risk assessment, and other important energy-related areas. To date, the project has provided training in stand-alone wind and solar energy project development, integrated resource planning, and demand side management. Under the training program, USAID is also providing technical assistance to the government of Brazil in establishing a regulatory structure using working groups derived from government and industry. The program will also conduct follow-on activities including an evaluation of ongoing training, and support for a training/alumni network.

Brazilian Regulatory Executive Exchange, USAID
Through the U.S. Energy Association, USAID has sponsored U.S. study tours and capacity building to assist regulatory reform in Brazil's power sector.

Economic Modeling, USEPA
USEPA is working through USDOE's Pacific Northwest National Laboratory to support the development of a Brazil module for the Second Generation Model, a tool for economic analysis. Brazilian economic modeling experts will be engaged in analyzing policy scenarios and the potential benefits of emissions trading. This project will improve Brazilian modeling capacity and stimulate additional analyses. The Module development is being carried out with the Graduate School of Engineering of the University of Rio de Janeiro.

Energy Efficiency in Power Sector Restructuring, USAID
USAID provides assistance to the Brazilian government for its effort to undertake a comprehensive restructuring, reform and privatization of its power sector through a process for incorporating energy efficiency into the new regulatory framework. USAID plans to prepare model mechanisms and assessments to contribute to this effort.

Evaluation of Possible Greenhouse Gas Mitigation Projects in Brazil, USAID, USEPA
This project is supported by USEPA and USAID, and is being carried out by USDOE's Lawrence Berkley National Laboratory and the University of Sao Paulo in Brazil. It was initiated in mid-1998 to provide technical input to the U.S. and Brazilian experts on possible greenhouse gas mitigation projects, evaluation procedures and methodological issues. Since that time the project has become associated with the U.S.-Brazil Aspen Global Forum, a dialogue process aimed at engaging business, government and non-governmental organizations in developing consensus on issues related to the Clean Development Mechanism. The Aspen Forum has assisted this process by inviting private business and non-governmental organizations to submit potential greenhouse gas mitigation projects in Brazil for evaluation.

Feasibility Assessment , USAID
USAID, in collaboration with SEMIG (a Brazilian utility company) and METALSIDER (a Brazilian pig-iron producer), performed a study to assess the potential of using waste pig-iron blast furnace gas to power internal combustion engine generators for electricity production. The study assesses the potential of using blast furnace gas in a standard power generation system design that could be commercialized and replicated at multiple installations.

International Seminar on Forest and Natural Resource Administration and Management, Alta Floresta, Mato Grosso, Brazil, USAID
USAID and its forestry partners supported the training of participants at this workshop, which included field training of Brazilian graduate students in field techniques in fire assessment as part of the sustainable forest management project in the Tapajos National Forest.

Landfill Gas Utilization in Brazil, USEPA
USEPA and Brazilian officials performed a feasibility study to examine opportunities for methane recovery projects, and USEPA helped disseminate a request for proposals to potential developers. Project proposals have been developed and efforts are underway to facilitate private sector partnerships and development options.

Leveraging Funds for Energy Development, USAID
USAID assisted municipalities in using potential World Bank funds to improve their energy services and, in particular, to meet their energy needs with renewable energy sources. USAID is conducting a study on the institutional and regulatory barriers to the implementation of future loans to identify and recommend options for overcoming the policy, regulatory, and institutional barriers to the market-based dissemination of renewable energy systems in rural areas in three target states.

Manaus Demand-Side Management Support, USAID
USAID is working with PROCEL (Programa Nacional de Conservação de Energia Elétrica, the National Electric Energy Conservation Program) and the local utility, Eletronorte, in support of pilot demand-side management activities in Manaus, Amazonas, where electricity consumption has grown rapidly in the last few years. Due to hydroelectric base generation and high thermal generation costs, demand-side management programs appear to be cost effective for both load management and energy savings. USAID support targets the development and start-up of air-

conditioning and lighting programs in the commercial and industrial sectors and USAID is working with PROCEL and Eletronorte to develop a combination of short term measures and long-term programs.

Peer Exchanges, USAID
USAID sponsors the National Association of State Energy Officials establishment of peer exchange programs between state energy offices in the U.S. and selected counterparts in Brazil.

Reduction of Volatile Organic Compounds from Landfills, USAID
USAID is collaborating with the Brazilian Ministries of Mines and Energy, Science and Technology, Environment, Water, and American Affairs to assess the potential of using methane gas from existing and future landfills. An assessment was conducted for fourteen landfill sites which had been pre-selected as being the most representative of the landfills in Brazil. The conclusion of this effort indicates that there are viable projects and, if fully implemented, these projects would reduce methane emissions significantly over time.

Renewable Energy Project Support Office, USAID
USAID is building a network of non-governmental organizations to support increased use of renewable energy in developing countries. Known as Renewable Energy Project Support Offices (REPSOs), these USAID sponsored in-country facilities are managed by local institutions and are designed to provide the technical and financial assistance necessary to help identify and evaluate renewable energy projects. The REPSO in Brazil, Salvador, Bahia is staffed by industry experts working with cooperatives, non-governmental organizations, and private companies interested in renewable energy projects. REPSO-Brazil provides assistance in local market and capacity building, information dissemination, project identification and development, provision of pre-investment study funds, and industry based training in collaboration with other energy program initiatives. REPSOs work closely with PRODEEM, the Brazilian governmental organization promoting increased social services to rural populations via renewable energy technologies.

Renewable Energy Technology Cooperation, USDOE
USDOE is collaborating with the Brazilian Department of Minerals and Energy and providing technical support to design and implement renewable energy technology programs in areas including photovoltaic systems, photovoltaic/wind water pumping systems, home photovoltaic systems, and village scale hybrid photovoltaic replacement for diesel.

Resident Advisor for Energy Efficiency, USAID
USAID supported the one-year residency of a U.S. energy efficiency expert to complement the work of various Brazilian agencies in electrical energy efficiency. In addition to supporting other USAID programs in the country, the consultant assists a variety of Brazilian agencies by providing hands-on technical expertise to those involved with the national energy management program. The consultant focused on areas including: development of market transformation programs for new technologies such as high efficiency motors and lighting systems; support in the training and promotion of private energy service companies in Brazil, including monitoring and evaluation programs; analysis and advocacy for the development of state and national

equipment and appliance efficiency standards and building energy codes; and support for energy efficiency non-governmental organizations in Brazil.

Seminar on the Potential of Clean Development Mechanism Projects in the Brazil Renewable Energy Sector, USAID
This December 1998 seminar, funded by USAID, explored the potential of Clean Development Mechanism projects with developers in the renewable and clean energy sectors in Brazil, and discussed opportunities for using the Clean Development Mechanism to finance renewable energy projects.

Support to ANEEL, USAID
The Agência Nacional de Energia Elétrica (ANEEL) is the established Federal Power Regulatory Agency of Brazil. ANEEL is establishing the regulatory regime necessary to provide the right signals to the market to support national energy policies. USAID plans to assist ANEEL's on-going work to develop enhanced eligibility criteria set for energy efficiency projects. USAID is also partnering with ANEEL and three U.S. Public State Utility Commissions to facilitate the sharing of U.S. regulatory expertise with Brazilian regulatory agencies.

Support to Brazilian Ministries, USAID
USAID will assist the Brazil Ministry of Mines and Energy through its Secretariat of Energy in the preparatory work for the National Energy Policy Council. USAID will provide specific training and advisory services on energy policy and programmatic issues, such as rural clean energy applications and energy efficiency, focusing on assisting policy, regulations, and training and technology supportive of market-oriented clean energy production and use.

Support to the National Program for Electrical Energy Conservation (PROCEL), USAID
PROCEL is the official program for energy efficiency in Brazil's Ministry of Mines and Energy. USAID supported an energy efficiency advisor to work with PROCEL, and plans to continue its assistance in coordination with Agência Nacional de Energia Elétrica to support the inclusion of energy efficiency elements into Brazil's new regulatory regime.

Technical Assistance to the World Bank, USAID
USAID assisted the World Bank with the design of an energy efficiency loan to Brazil, which is directed toward utility programs, non-utility programs, and national programs. Utility programs include both demand- and supply-side investments, including improved power generation efficiency, demand-side management, and reduced transmission and distribution losses. Non-utility investments are in energy service company promotion, energy efficiency standards, and appliance testing and labeling. Funds will also be used for technical assistance with efficiency program design and management, as well as power sector regulation formulation for Brazil.

Training in Reduced Impact Harvesting Practices, USAID
USAID has provided training in reduced impact harvesting practices in Brazil.

U.S. Renewable Energy Industry Representative, USAID
USAID supports an industry representative in Brazil to work with cooperatives, non-governmental organizations, and private companies interested in non-hydroelectric renewable energy projects. The industry representative assists coordination of meetings between Brazilian government officials and U.S. government and industry. The representative is also cooperating with marketing and supporting the Renewable Energy Program Support Office cost-share program and solicitation. General duties of the industry representative involve industry collaboration, financial mechanisms for renewable energy projects, utility scale project identification and partnering, and productive uses of renewable energy. Specific programs of the industry representative include technical assistance to the Brazil Energy for Social and Rural Development Program; utility collaboration (the representative links U.S. industry to various on-grid renewables projects, including several biomass energy projects and a large wind farm); Brazilian non-governmental organization support; and trade delegation support.

Chile
Hemispheric Clean Cities Program, USDOE
USDOE's Clean Cities Program is working to develop a public/private partnership model in Santiago, Chile in order to help build a local market for alternative transportation fuels. By using cleaner-burning, alternative fuel vehicles, Santiago will be able to improve its urban air quality and lessen its dependence on one type of fuel for its transportation sector. The Program will work together with local stakeholders to encourage fleet owners to purchase alternative fuel vehicles. The Program provides support through competitive grant funding, decision-making tools, public information products, and case studies on fleets that are successfully using alternative fuel vehicles. Efforts are underway in Santiago to provide guidance on establishing a local Clean Cities Program.

Support for Technical Studies, USEPA
USEPA is working with the Chilean National Commission on the Environment to support the Chilean government's efforts to conduct analyses related to climate change mitigation in Chile. The work focuses on evaluation of economic costs and benefits of climate change response strategies; assessment of ancillary benefits of greenhouse gas mitigation; strengthening institutional capacity to address climate change; and outreach to key stakeholders and decisionmakers.

Dominican Republic
Global Climate Change and Development, Workshop, Dominican Republic, USAID
In September 1999, approximately 20 high-level developing country policy makers drawn from a wide range of ministries, the private sector and non-governmental organizations participated in this one-day seminar. The course was structured to raise awareness of climate change, its potential links to sustainable development and economic growth (both in enhancing development and limiting it), and was tailored to the emissions profile and vulnerabilities of the Dominican Republic.

Ecuador
National Institutional Capacity Building Workshop, USAID

The Center for Sustainable Development in the Americas (CSDA), with sponsorship of USAID, will organize a workshop in Ecuador in 2000 to provide the government, private sector, and non-governmental organizations with the tools to understanding climate change. The workshop, which will be modeled on other CSDA capacity building workshops in the region, will aim to provide relevant actors with the information tools to explore issues related to market-based mechanisms, and will also focus on the development of a national program that meets Ecuador's sustainable development goals.

Guatemala

Fire Suppression and Management Training, Guatemala, USAID

USAID and its forestry partners have supported fire suppression and management training in support of the national strategic planning efforts.

Guyana

International Technical Workshop on Reduced Impact Logging, USAID

USAID and its forestry partners supported the participation, sponsorship, and design of the International Technical Workshop on Reduced Impact Logging.

Honduras

Fire Assessment and Fire Suppression Training, Honduras, USAID

Under the USAID Forestry Development Project, USAID and its forestry partners provided fire assessment and fire suppression training.

Jamaica

Global Climate Change and Development Workshop, USAID

In September 1999, approximately 20 high-level developing country policy makers drawn from a wide range of ministries, the private sector and non-governmental organizations participated in this one-day seminar. The course was structured to raise awareness of climate change, its potential links to sustainable development and economic growth (both in enhancing development and limiting it), and was tailored to the specifics of Jamaica's emissions profile and vulnerabilities.

Mexico

Border Energy Forum, USDOE

USDOE and the Mexican Ministry of Energy launched the Border Energy Forum to address the vital issues of energy and the environment that affect the rapidly developing region of northern Mexico and the southwestern United States. Each year, a broad spectrum of leaders from industry, government, educational institutions and environmental organizations of both countries will convene to develop mutually beneficial strategies for addressing these issues.

Cities for Climate Protection, USAID

In coordination with the International Council for Local Environmental Initiatives (ICLEI), USAID is supporting a five-milestone process to reduce greenhouse gas emissions. To date, ICLEI has placed long-term advisors in Mexico to facilitate this process. Five cities in Mexico are participating in the program and have begun the process of establishing emissions inventories

and identifying demonstration projects. Examples of potential projects include: promotion of methane gas capture from municipal landfills, improved traffic management, clean or renewable fuels for municipal vehicles, or energy-efficient street lighting. An important component of the ICLEI model is its focus on the development of specific emissions reduction projects.

Directors from Protected Areas in Mexico Training, USAID
USAID and its partners provided interagency training to the directors of protected areas in Mexico. The training focused on planning methodologies, field techniques for developing and implementing restoration plans, and a U.S. study tour.

Fuel-Cell Buses, USEPA
This USEPA supported program demonstrates the use of zero emissions buses in Mexico City. The program also informs operators and potential buyers of fuel cell technologies.

Industries for Climate Protection, USAID, USDOE, USEPA
Climate Wise is a joint USEPA/USDOE program designed to encourage industries to take advantage of the economic and environmental benefits associated with energy efficiency improvements and greenhouse gas emissions reductions. Over 400 U.S. companies have enrolled in this program, several of which have facilities or suppliers in developing countries, including Mexico. In cooperation with USEPA, USAID will establish peer partnerships between U.S. participants in the Climate Wise program and, when possible, their industrial counterparts located in the same cities enrolled in the Cities for Climate Protection program.

Landfill Gas Utilization at the Prados De La Montana Landfill in Mexico City, Mexico, USEPA
USEPA supported a feasibility assessment and is currently working with Mexican officials to develop a demonstration project of effective landfill methane recovery methods.

Mexico Environmental Management Project, USAID
USAID has strengthened the Mexican electric sector institutions, which resulted in the design and implementation of a five-year national-scale incentives/rebates program in Mexico.

National Fire Training and Restoration Program, USAID
USAID supports this multifaceted program which includes formal training courses, hands-on fire response training, and regional fire courses. In addition, residents in rural Mexico were trained in basic fire prevention, suppression and management.

Peer Exchanges, USAID
USAID sponsors the National Association of State Energy Officials establishment of peer exchange programs between state energy offices in the U.S. and selected counterparts in Mexico.

Power Wheeling, USAID
USAID is supporting exploration of the legal, regulatory, and environmental factors affecting cross-border trade in electricity between the U.S. and Mexico which could improve the power generation mix.

Reduction of Power Station Emissions, USAID
USAID is facilitating acceleration of the transfer of environmental control technologies to CFE, the Mexican national utility. The program aims to promote implementation of energy efficiency technologies and introduce low carbon-emitting energy systems through the private sector and public/private partnerships.

Reduction of Refinery Emissions, USAID
USAID is collaborating with the Mexican company PEMEX to accelerate transfer of environmental control technologies. The program aims to promote the implementation of energy efficiency technologies and introduce low carbon-emitting energy systems through the private sector and public/private partnerships.

Support for Deployment of Renewable Energy and Energy Efficiency Projects, USDOE
USDOE is collaborating with counterparts in Mexico to establish a framework for the commercially sustainable development of renewable energy and energy efficiency projects in Mexico.

Support for Technical Work, USEPA
USEPA is providing support for an update to Mexico's greenhouse gas inventory using 1996 data and a forestry project evaluating greenhouse emissions in the humid tropical region. USEPA is also collaborating on economic modeling of greenhouse gas mitigation through two economics workshops, and providing support for Mexico's climate change policy analysis efforts.

Transportation & Electric Vehicles, USAID
USAID is sponsoring activities designed to leverage public and private investments in electric vehicles, with an objective to reduce particulate matter and lead in the urban environment.

Panama
Institutional Strengthening of the Panamanian Clean Development Mechanism Office, USAID
USAID provided training and capacity building to strengthen the newly established Joint Implementation/Clean Development Mechanism office in Panama.

Parque Metropolitana/ Panama Environmental Communication Materials, USAID
USAID and its partners supported the production of environmental educational materials to enhance the outreach efforts of the Parque Metropolitana in Panama City, Panama.

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